

# **Advisory Group on Motorcycling: Final Report to Government**

August 2004



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# CONTENTS

<b>INTRODUCTION</b>	8
<b>BACKGROUND</b>	9
<b>SAFETY</b>	11
<b>Introduction</b>	11
<b>Measures completed</b>	12
<b>2 years on/1 year off</b>	12
<b>Guidance for riders returning after a break</b>	13
<b>Codes of Practice for couriers and fast food sector</b>	13
<b>Hazard perception testing</b>	13
<b>Publicity</b>	14
<b>Measures in hand</b>	14
<b>Developing pre-test rider training</b>	14
<b>Developing vocational training</b>	15
<b>Developing post-test rider training</b>	15
<b>DAS supervision</b>	16
<b>Future initiatives</b>	17
<b>Assessment and training</b>	17
<b>Pass-Plus for bikes</b>	18
<b>Registration of motorcycling trainers</b>	18
<b>Learning aids</b>	19
<b>EC changes to the motorcycle test</b>	19
<b>Media</b>	19
<b>Wider initiatives</b>	20
<b>HIGHWAYS AGENCY</b>	22
<b>Introduction</b>	22
<b>Measures completed</b>	22

<b>Wire rope safety fences</b>	22
<b>Measures in hand</b>	22
<b>Safety fence posts</b>	22
<b>Manhole covers</b>	23
<b>Safety Action Plan</b>	23
<b>Speed related issues</b>	24
<b>Future initiatives</b>	24
<b>Manhole covers</b>	24
<b>White lines</b>	24
<b>THE TASK FORCES</b>	24
<b>VEHICLE SAFETY AND SECURITY TASK FORCE</b>	25
<b>Introduction</b>	25
<b>Measures completed</b>	25
<b>Braking systems</b>	25
<b>Security</b>	26
<b>Measures in hand</b>	26
<b>Lighting</b>	26
<b>Secondary safety</b>	27
<b>Safety helmets</b>	28
<b>Security</b>	28
<b>Future initiatives</b>	29
<b>Replacement brake linings</b>	29
<b>Tyre safety and consumer awareness</b>	29
<b>Rider rearward vision</b>	30
<b>Lighting</b>	30
<b>Direction indicator tell-tale lamps</b>	31
<b>New Motorcycle Assessment Programme</b>	32
<b>Security</b>	32

<b>INTEGRATION AND TRAFFIC MANAGEMENT TASK FORCE</b>	34
<b>Introduction</b>	34
<b>Measures completed</b>	34
<b>Motorcycle parking powers in Transport Act 2000</b>	34
<b>Motorcycle parking Traffic Advisory Leaflet 2/02</b>	34
<b>M4 bus lane</b>	35
<b>Analysis of Local Transport Plans</b>	35
<b>First studies of congestion implications of increased motorcycle use</b>	35
<b>Measures in hand</b>	36
<b>Motorcycles in bus lanes</b>	36
<b>Advice on providing for motorcycling in highway and traffic engineering</b>	38
<b>Advice on provision for motorcycles in Travel Plans</b>	38
<b>Research into Advance Stop Lines for motorcycles</b>	39
<b>Further research into motorcycling and congestion</b>	40
<b>Related research at Southampton University</b>	41
<b>PTWs in Local Transport Plans</b>	41
<b>Future initiatives</b>	41
<b>Developing better analytical tools to facilitate mainstreaming of motorcycling</b>	41
<b>Motorcycling as part of multi-modal journeys</b>	42
<b>Relationship between road users</b>	42
<b>ENVIRONMENTAL AND FISCAL TASK FORCE</b>	44
<b>Introduction</b>	44
<b>Measures completed</b>	44
<b>Emissions performance of motorcycles against cars</b>	44
<b>Noise</b>	45
<b>Vehicle excise duty restructured for PTWs</b>	46
<b>Value Added Tax</b>	47

<b>Measures in hand</b>	47
<b>VED evasion among PTWs</b>	47
<b>Future initiatives</b>	48
<b>STATISTICS TASK FORCE</b>	49
<b>Introduction</b>	49
<b>Measures completed</b>	49
<b>Availability of statistics</b>	49
<b>Traffic estimates</b>	49
<b>Motorcycle stock statistics</b>	50
<b>Casualty statistics</b>	50
<b>Motorcycle theft</b>	51
<b>Journey purpose</b>	51
<b>Measures in hand</b>	51
<b>Motorcycle stock statistics</b>	51
<b>Minor road traffic counts</b>	52
<b>VED evasion</b>	52
<b>Future initiatives</b>	53
<b>RESEARCH TASK FORCE</b>	54
<b>Introduction</b>	54
<b>Measures completed</b>	54
<b>Analysis of police fatal motorcycle accident reports</b>	54
<b>Scoping study on motorcycle training</b>	55
<b>Older motorcyclists</b>	56
<b>Multivariate analysis of motorcyclists' accident risk factors</b>	59
<b>Measures in hand</b>	60
<b>In-depth study of motorcycle accidents</b>	60
<b>Future initiatives</b>	62

<b>SUMMARY AND RECOMMENDATIONS</b>	64
<b>Summary</b>	64
<b>Safety</b>	64
<b>Vehicle Safety and Security Task Force</b>	65
<b>Integration &amp; Traffic Management Task Force</b>	65
<b>Environmental &amp; Fiscal Task Force</b>	66
<b>Statistics Task Force</b>	66
<b>Research Task Force</b>	67
<b>Recommendations</b>	68
<b>Suggestions</b>	68
<b>Recommendations</b>	70
<b>ANNEX</b>	75

## INTRODUCTION

1. The Government's White Paper on the Future of Transport, "A New Deal for Transport: Better For Everyone", recognised that mopeds and motorcycles can provide an alternative means of transport for many trips and that they offer an affordable alternative to the car. The White Paper also acknowledged the potential benefits offered by motorcycling for the environment and for congestion. However, it recognised that these were dependent on a number of factors and that the role of motorcycling in an integrated transport policy raises some important and complex issues, including safety and environmental impact.
2. The Government concluded that it required advice on these issues and it therefore established the Advisory Group on Motorcycling (AGM). It met for the first time on 6 May 1999. Its membership represents motorcycling interests and other interested parties (Terms of Reference and membership are annexed). The AGM set up five Task Forces to examine vehicle safety and security, integration and traffic management, environmental and fiscal issues, statistics, and research.
3. This Report details the work of the AGM and its Task Forces and makes recommendations to Government. The results will assist the Government in further developing its policy and strategy on motorcycling, which will be published in response to this Report.

## BACKGROUND

4. The Government recognises that powered two wheelers (PTWs)<sup>1</sup> have a role to play in a national transport strategy. Its transport aims were set out in the integrated transport White Paper. Since then, aided by advice from the AGM, the Government's policies have begun to develop so that they better reflect motorcycling as an integrated form of transport.
5. In March 2000, the Government published its Local Transport Plan (LTP) guidance, "Guidance on Full Local Transport Plans". This stated that local authorities should take account of the contribution PTWs can make in delivering integrated transport policies, for example where they are being used in congested traffic conditions, and should consider specific measures to assist motorcyclists in making integrated journeys. Indeed, it advised that all relevant aspects of LTPs – including road safety, planning and social policies – should take account of the needs of motorcyclists. Specifically, the guidance advised local authorities to:
  - consider the appropriate number of total parking spaces for cars and motorcycles;
  - consider good access, suitable facilities and secure parking at public transport interchanges;
  - consider the implications for vulnerable road users, such as motorcyclists, in deciding how to remedy deficiencies in the road surface when preparing maintenance strategies;
  - consider running properly monitored pilot studies on the use of bus lanes by motorcyclists, to help inform decisions on this practice; and
  - be aware of the role PTWs can play in remote or rural areas, where they offer an affordable alternative to the car and can bring benefits to the individual, including widening employment opportunities.
6. The Government's 10-Year Plan for transport, published in 2000, also recognised that PTWs have a part to play in contributing to the Government's transport objectives. The Plan acknowledged the advantages of PTWs over cars in terms of flexibility and affordability. It noted that PTWs can make more efficient use of road space in congested town centres and provide a cheaper alternative for people on low incomes living in rural areas.
7. Also, as part of the Transport Energy Best Practice Programme, the Government published a Travel Plan Resource Pack for employers. This, too, highlights the potential environmental benefits of PTWs over cars and the space efficient nature of

<sup>1</sup> PTWs include cyclemotors, mopeds, scooters and motorcycles.

PTWs, particularly in terms of parking and congestion. The advice notes that benefits to an organisation's employees could include lower running costs and quicker travel than by car. The resource pack also details ways that employers might assist motorcyclists: by provision of safe and secure parking; changing/storage locker facilities; interest free loans for small motorcycles; and safety training. In addition to encouraging businesses to adopt travel plans, the Government has produced guidance for its own Departments on developing effective travel plans. This acknowledges that small motorcycles and mopeds can make faster progress in congested traffic conditions, take up less parking space, have lower running costs and may be more environmentally friendly than private cars. It also advises that safety training programmes for riders should be considered.

8. Similarly, in support of the Government's recognition that lack of transport can be a barrier to people living in rural areas in accessing training, education and employment opportunities, "Wheels to Work" schemes provide an innovative way of overcoming transport barriers. There is a broad range of organisations leading existing schemes including voluntary organisations, Rural Community Councils, local authorities, youth organisations, colleges and training centres. Solutions offered include, amongst other things, loans of mopeds or bicycles. The Government recognised the value of such schemes in its Rural White Paper, and funding via the Countryside Agency's Rural Transport Partnership, amongst other sources, has enabled development of a number of new schemes. The Agency has published a Guide, "Two Wheels Work", to help in developing and implementing schemes, sharing good practice based on the experience of others.
9. However, the Advisory Group still considers that bias by some institutions including local authorities, employers, regional government, educational bodies, environmental and safety pressure groups is contrary to improving PTW safety. The danger of such bias is a failure to include PTWs in Local Transport Plans or Business Travel Plans, for example, or to adapt infrastructure to assist PTWs. The Group believes that all bodies with an interest in motorcycling should seek to remedy this bias.

# SAFETY

## Introduction

10. A significant issue for Government, which will be fundamental to the conclusions reached on PTW strategy, is the safety of motorcyclists. Motorcyclists represent a large proportion of road casualties in relation to their numbers. They make up around 1% of road traffic, but suffer around 18% of deaths and serious injuries (KSIs). The Government will be seeking to guard against increased casualties should people continue to switch to this mode.
11. Casualty statistics for 2002 show that PTW deaths rose to 609 from 583 the previous year (+4%) and serious injuries rose from 6,722 to 6,891 (+3%). Total PTW casualties fell 2%. The trend shows that whilst casualties are higher in urban areas (4529 KSIs in 2002 compared to 2811 in non built-up areas) more motorcyclists are being killed on non built-up (rural) roads than on built-up roads – in 2002 the figures were 347 and 242 respectively.
12. These rises are not surprising, given that motorcycle traffic increased by 5% on the previous year. Casualty rates for PTWs generally fell and motorcycling is now safer in rate terms than 10 years ago for all casualty types except ‘fatals’. The ‘fatal’ rate has risen 7% since 1993, but the ‘Killed/Seriously Injured’ rate has fallen over 18%, the ‘slight’ rate has fallen 14% and the ‘all casualty’ rate has fallen over 15%.
13. However motorcyclists remain the most vulnerable road users. They are 30 times more likely to be killed than car users and 4 times more likely to be killed than cyclists.
14. In March 2000 the Government published a Road Safety Strategy for the next 10 years, “Tomorrow’s Roads – Safer for Everyone”. This includes road accident casualty reduction targets to be achieved by 2010. These are a 40% reduction in the number of people killed or seriously injured; a 50% reduction in the number of children killed or seriously injured; and a 10% reduction in the slight casualty rate. Action is required to deliver these targets.

**Recommendation: the Advisory Group recommends that the Government takes into account rate-based performance for motorcyclist casualties in addition to the existing Road Safety Strategy casualty reduction targets.**

15. On motorcycling, the Strategy includes measures to:
  - improve training and testing for all learner riders;

- provide guidance for people returning to motorcycling after a break, and people riding as part of their work;
  - ensure the quality of instruction;
  - help drivers become more aware of the vulnerability of motorcyclists; and
  - promote improvements in engineering and technical standards that could protect motorcyclists better, including new safety helmet standards.
16. The remainder of this chapter describes safety initiatives that have been or are to be taken by Government – some with the help of the Advisory Group – and Advisory Group suggestions and further recommendations for new initiatives.

## Measures completed

### *“2 years on/1 year off”*

17. In February 2001 the “2-years on, 1-year off” rule for provisional motorcycle licences came to an end. Prior to that any provisional motorcycle licence holder who had not passed the motorcycling test within 2 years had their licence suspended for a year. Under the new arrangements provisional motorcycle and moped licences are valid until age 70 years, subject to the rider holding a current Compulsory Basic Training (CBT) certificate.
18. This was part of a package of changes to the licensing and testing of motorcyclists and moped riders introduced at the same time, which also included:
- putting a 2 year “life” on CBT certificates;
  - newly qualified car drivers to have to take CBT before they can ride a moped;
  - enabling CBT to be taken by riders using motorcycle-sidecar combinations and mopeds with more than 2 wheels;
  - exempting learner riders from re-taking CBT when upgrading their motorcycle licence to ride larger machines;
  - setting a maximum ratio for on-road CBT training of 4 learners to each instructor;
  - requiring the use of dipped headlights during CBT and the practical test;
  - requiring all riders who offend and are returned to learner status to take CBT;
  - requiring car and motorcycle test candidates to pass a relevant theory test; and
  - ending the grant of a full sub-category B1 (lightweight car) licence to those who pass a motorcycle test.

### *Guidance for riders returning after a break*

19. In view of concerns about the rising number of casualties amongst older riders, the Driving Standards Agency (DSA) produced advice and guidance aimed at full motorcycling licence holders. A free information leaflet, “Motorcycling – the more you know, the better it gets”, was produced in April 2002. The leaflet, which was distributed by trainers and retailers, reminded those returning to motorcycling about the particular skills needed to ride safely and encouraged them to seek refresher or developmental training. In addition the Agency has re-written and updated the handbook for all motorcyclists, “Motorcycle riding – the essential skills”, to include advice for those returning to riding after a break.

### *Codes of Practice for couriers and fast food sector*

20. As part of an inter-agency initiative looking at work-related road safety, a task-group considered issues concerning those who ride motorcycles and mopeds as part of their jobs, particularly motorcycle couriers and fast-food delivery moped riders. Subsequently the Government worked with the Despatch Association and the Pizza, Pasta and Italian Food Association to develop new Codes of Practice for the courier and fast food industries. The Codes were published in 2001 and aim to maintain the highest standards of road safety and to reduce accidents on the road to a minimum.

### *Hazard perception testing*

21. In November 2002, the DSA introduced a separate Hazard Perception Testing (HPT) element into the theory test. Theory test candidates are shown a number of moving-image video clips on-screen and have to indicate as soon as they see a hazard developing which may result in the driver or rider taking some action, such as changing speed or direction. The sooner a response is made the higher the score.
22. As HPT forms part of every theory test it has a valuable role to play in raising the awareness of vulnerable road users, including motorcyclists, amongst all test candidates. Motorcycles appear in more than a third of all HPT film clips either as part of the developing hazard or in the background. HPT therefore, not only examines the skills of learner riders – it also raises the awareness of other learners to the vulnerability of motorcyclists.
23. The DSA has developed training materials for both individual and group use to help develop the required skills. Since its launch in January 2002, the DSA has distributed more than 6,000 copies of the hazard awareness video “What If – for motorcyclists”. In addition all motorcycle training bodies were given a copy of the Roadsense HPT training package comprising a video and workbook.

## *Publicity*

24. In 2001, the Department for Transport (DfT) launched a new publicity campaign aimed at improving the safety of the commuter motorcyclist. The campaign – including a TV advertisement supported by radio advertising, posters and leaflets – targets motorcyclists and motorists. It seeks to heighten drivers' awareness of motorbikes whilst encouraging motorcyclists to ride so that they can be seen. DfT consulted motorcycling representatives on the Advisory Group very closely in the development of this publicity. The result is a campaign that has been well received in all quarters and which is a testament to the co-operative working of the Advisory Group.
25. This year DfT launched further motorcycle safety publicity aimed at sportsbike riders who ride for pleasure and who represent a significant proportion of motorcyclist casualties. Once again this work has been carried out in consultation with key members of the Advisory Group close to motorcycling culture in order to ensure a film that will be well received and have the greatest chance of encouraging safe riding. The DfT is also the sponsor of the British Superbike championships for 2004.
26. The Advisory Group notes that the DfT's THINK! motorcycle publicity has been based upon improving observation and driving/riding standards. This should continue, not only for publicity aimed directly at PTWs but also for other THINK! advertising.

**Recommendation: DfT's future advertising to consider a hard hitting and sustained awareness campaign in which motorcyclists are targeted to better negotiate junctions, cornering, bends and overtaking. Since a high proportion of accidents involving motorcyclists are caused by other road users, a campaign of a similar nature to make them become more aware of motorcyclists should be continued in parallel.**

## **Measures in hand**

### *Developing pre-test rider training*

27. The DSA will shortly bring forward proposals to improve the operation of the CBT scheme. The key features will be:
  - modernising the quality assurance and supervisory arrangements for trainers delivering CBT;
  - introducing a system for Approved Training Bodies and their instructors to appeal against authorisation decisions; and

- introducing fairer and more effective arrangements for recovering the cost of assessing instructors and administering the CBT scheme.

28. The DSA is also pursuing the development of training plans and logbooks.
29. For those who have already completed CBT, the Advisory Group suggests that Government should consider whether a minimum number of hours training should be introduced to ensure that the correct level of training is given.

### *Developing vocational training*

30. The DSA has held discussions with Sector Skills for Logistics, the representative training body for couriers, about the potential for developing national occupational standards for motorcyclists working as couriers. This approach promises to link skills maintenance for these riders with the broader approach towards maintaining and enhancing driving standards within the road transport sector.
31. The DSA has also been working with the Motorcycle Rider Training Association (MRTA) to develop a model post-CBT training course that could be promulgated to raise standards for riders working in the fast-food delivery industry.
32. The Advisory Group suggests that the Government should consider whether it is appropriate for occupational riding to be undertaken by riders with a provisional licence.

### *Developing post-test rider training*

33. The Road Safety Strategy “Tomorrow’s Roads – Safer for Everyone” commits the Government to regulate all driving and riding instructors when a suitable legislative opportunity arises. Although it is intended that registration of accredited motorcycling instructors would initially be introduced on a voluntary basis, any scheme would offer the opportunity to pilot features that could help with the transitional provisions to a statutory arrangement.
34. In the meantime the DSA is considering, with key motorcycling interests, how post-test training could be given more cohesion. This has developed into a proposal for the voluntary registration of all post-test rider development trainers. Registration is designed to provide quality assurance for post-test training for all riders, but with a focus on the needs of:
- newly qualified riders;
  - persons upgrading their motorcycles; and
  - persons returning to motorcycling after a break.

The training provided:

- should involve assessment to help focus appropriate training, but will not involve another test; and
  - should not seek to produce “advanced riders” in the traditional sense. It should be of benefit to all riders, irrespective of ability.
35. Discussions have taken place with the insurance industry to explore if participation in the scheme by registered trainers, and encouragement of riders to undergo further training, could be incentivised by insurance discounts. It is understood that representatives of the insurance industry are encouraged by the registration scheme proposals and have indicated that discounts will be available and possibly improved once the road safety benefits have been shown.
36. The Advisory Group takes the view that this post-test training should recognise that the skills set required should differentiate from basic skills taught to novice riders. Riders should learn skills such as braking, skid and speed control at the national limits, cornering, steering and countersteering to enable them to deal with hazards such as diesel oil, mud, bad road surfaces or other obstacles.

### *DAS supervision*

37. Currently there is no statutory requirement for Direct Access Scheme (DAS) qualified instructors to be supervised once they have qualified. In partnership with the MRTA, the DSA has initiated a pilot project to conduct DAS training assessments during ‘real life’ training courses. Knowledge gained during the pilot will then be used to develop a national DAS training standard.
38. The Advisory Group believes that since the majority of novice riders choose to pass their test via the Direct Access route, as a relatively fast route to big-bike riding, it is timely for Government to consider:
- whether or not the training and testing structure itself adequately equips riders for the conditions that they face on the road;
  - introducing elements of advanced riding technique and a requirement for candidates to complete a minimum number of hours on-road assessed riding (utilising a log-book scheme) prior to being awarded a test pass;
  - introducing a post-test training requirement; and
  - introducing ongoing Direct Access instructor monitoring.

## Future initiatives

### *Assessment and Training*

39. The Advisory Group suggests that, as a large proportion of motorcyclist casualties are caused by other road users, further work is required into how drivers can be made more aware of motorcyclists. Drivers need to be made aware of issues such as how their actions can affect motorcyclists, the limitations of PTW manoeuvrability in wet/slippery conditions, limited peripheral vision when a helmet is worn, judgement of speed, etc.
40. The Advisory Group also suggests that inclusion of bike awareness questions in the car theory test may help.

**Recommendation: with a high proportion of motorcycle accidents caused by other road users, the Advisory Group calls for more emphasis on raising the awareness of all road users about motorcyclists through the Highway Code, publicity campaigns, the driving test and enforcement.**

41. The Police too are concerned about motorcycle related collisions and are developing their own strategy to reduce casualties. This includes standardisation across the country of the motorcycling skills assessment scheme, Bikesafe.
42. Some police forces, in liaison with local authorities, are conducting Rider Improvement Courses for motorcyclists. This can apply to motorcyclists seen to be riding badly when no offence is committed, and offered as an alternative to prosecution when an offence is committed. Like BikeSafe these schemes should be standardised nationally and their content subject to a syllabus.
43. As voluntary assessment and voluntary training schemes cannot be guaranteed to reach those most in need of them, the Advisory Group suggests extending the role of Rider Improvement and Speed Awareness schemes for offending motorcyclists. Consideration should be given to whether this should be optional or mandatory and the scope for a link to Bikesafe or post-test rider development schemes.

**Recommendation: the Advisory Group recommends that the Government considers funding mechanisms for a fully national Bikesafe programme that is operated to an agreed national standard. The scheme should appeal to those riders who are at the highest risk of having an accident. Bikesafe also needs to be clearer in terms of market positioning and activity so that overlap with the professional training industry doesn't occur.**

44. The Advisory Group also suggests that interested parties should consider subsidies for advanced training for motorcyclists as part of a co-ordinated approach to promoting advanced training and rider assessments. Training promotion should be linked to new bike sales and the opportunities within retail sites to promote training need to be explored.
45. The Advisory Group welcomes the actions of those insurance companies who are starting to offer discounts to riders who have completed additional training courses.

*“Pass-Plus for Bikes”*

46. The Pass-Plus training scheme applies to newly qualified drivers and addresses six topics to improve the experience of these drivers.

**Recommendation: the Advisory Group wishes to see the introduction of a scheme along the lines of Pass-Plus, for motorcyclists. This could possibly be linked into ongoing work on post-test rider development to enable riders to become more “streetwise” shortly after the test.**

*Registration of motorcycling trainers*

47. The DSA has held discussions with key motorcycling interests over developing a voluntary register of accredited motorcycle trainers, and as mentioned at paragraph 33 above, when a legislative opportunity arises DfT will pursue the introduction of a statutory register. The Advisory Group notes that quality control must be built into the voluntary register as a basis for any subsequent mandatory scheme.

**Recommendation: the Advisory Groups recommends –**

- **the development of a framework which will allow DSA to operate a voluntary list of post-test trainers;**
- **the development of national standards for trainers and the training they deliver;**
- **that training should follow standard syllabi with information available to riders listing the desired learning outcomes;**
- **that training companies should be certified to ensure conformity to agreed standards; and**
- **the closure of the loop-hole that allows anyone to train riders who have passed CBT and are receiving instruction on 125cc machines prior to the statutory test.**

### *Learning aids*

48. The DSA will be working to promote the development of learning materials that exploit the emerging opportunities offered by information and communication technologies such as distance learning via internet-linked interactive screens and DVDs. Interested parties are invited to engage with the Agency to help design products that could meet the needs of motorcyclists and to make best use of promotional opportunities within the retail market.

### *European Commission (EC) changes to the motorcycle test*

49. European Union Member States have until 2008 to introduce new standards for motorcycling tests, including more demanding higher speed manoeuvres.
50. Following detailed consultation with the motorcycle community the Government will be implementing the new requirements in the following way:
- all the special manoeuvres will be tested by the DSA on safe sites off the public road;
  - the manoeuvres will be tested as part of a single test event, undertaken immediately before the general on-road riding assessment; and
  - the test will be delivered from a network of test centres located so that most candidates should be able to reach a test centre within 30–45 minutes.
51. The EC is currently consulting Member States on a draft third licensing Directive.

**Recommendation: the Advisory Group recommends that the Government seeks to negotiate the third licensing Directive in order to retain subsidiarity, in so far as possible, over training and testing arrangements, and especially for Direct Access.**

### *Media*

52. The Advisory Group suggests that the press should be discouraged from glamorising inappropriate speed and behaviour, and from publishing advice on how to copy professional racers on public roads. Careful consideration needs to be given to the stereotypes and portrayal of motorcycling in both the specialist and non-specialist media.
53. The Motorcycle Industry Association (MCI) intends to initiate a range of media initiatives to reach an understanding with the motorcycle media regarding editorial coverage and to promote responsible riding.

### *Wider initiatives*

54. The Advisory Group suggests that the Government should consider the scope for a new “Roads Accident Investigation Board” with appropriate powers. A range of tools needs to be developed to look in-depth at each and every road accident that involves the attendance of the emergency services. These should not only consider the accident itself, but contributory and environmental factors and the level of rider/driver skills and training.
55. The Advisory Group notes that much work is taking place outside of central government to reduce casualties. Transport for London (TfL) have undertaken their own publicity, including a film which has been shown at cinemas and on TV. Local authorities continue to pursue a variety of initiatives at local level. Examples include Essex CC’s integrated approach in *Share the Road* for all road users including motorcyclists and, a partnership of local authorities, led by Nottingham CC and the Notts Police who have launched a *Shiny Side Up Partnership* which includes a film, “Fatal Attraction”, shown at race events.
56. Also notable is the contribution that motorcycling organisations are making to the shared agenda. The MCI has now established a dedicated road safety unit which, amongst other things, is working closely with the DSA on aspects of training development. The MCI plans to:
  - investigate the development of appropriate video or DVD media which will be distributed with new and used motorcycles;
  - investigate including safety messaging as part of the sales process in franchised dealerships;
  - distribute the DfT “Take Control” leaflet to buyers of new motorcycles; and
  - highlight and enforce the current ACEM (Association des Constructeurs Europeens de Motorcycles) Advertising Code of Practice for the advertising of motorcycles by manufacturers.
57. The Motorcycle Action Group (MAG) and the British Motorcyclists Federation (BMF) have both established charitable foundations to address safety issues. Amongst other things the BMF Foundation is joint funding road engineering design guidelines for motorcyclists. Meanwhile the MRTA continues to work with the Government to address training issues.
58. The Advisory Group notes that the Federation of European Motorcyclists Associations (FEMA) published a “European Agenda for Motorcycle Safety” in February 2004. This document will be relevant to the Government’s development of motorcycling strategy, addressing as it does issues such as: road infrastructure, Intelligent Transport Systems, rider training and testing, interactions with other road users, protective equipment and motorcycle design.

59. The Advisory Group suggests enhancing the role of road user education by bringing it to schools as a course in its own right. A GCSE on road safety is already offered in Northern Ireland and this should be extended to Great Britain.
60. The Advisory Group believes that the police should improve driving/riding standards by better targeted enforcement and education of motorcyclists and other road users. This could be achieved by enhancing the role of the traffic police to enforce and educate road users on better standards of road use through more traffic patrols in which bad driving/riding is targeted. It could usefully be linked to driver/ rider improvement courses as an alternative to prosecution.
61. An emphasis on the promotion of sportsbikes can attract the wrong sort of rider to be conducive to road safety. The Advisory Group considers that manufacturers and dealers should lead by market engineering to encourage the use of a range of more practical all-rounder motorcycles like Fazers, Bandits, Sprints and VFR 800s. These machines still have an impressive performance capability but are better suited to everyday use.

# HIGHWAYS AGENCY

## Introduction

62. The Highways Agency (HA) is an Executive Agency of the Department for Transport and is responsible for operating, maintaining and improving the strategic road network in England on behalf of the Secretary of State for Transport. Currently the road network administered by the HA comprises 7,601 km/4,723 miles of motorways and trunk roads.

## Measures completed

### *Wire rope safety fences*

63. The Transport Research Laboratory (TRL) has recently undertaken some evaluation of safety fences and the current conclusion from this work is that all types of barrier pose some form of risk for motorcyclists but wire rope is no more of a risk than other types of post and beam barriers. Wire rope safety barriers fully meet the requirements of the European product standard for Road Restraint Systems (BS EN 1317). TRL reported that there is inadequate information about the impact effects of motorcyclists with concrete, post and beam and wire rope safety barriers. There is, however, general agreement that the harmful items are the exposed posts of safety barriers, irrespective of their other components.

## Measures in hand

### *Safety Fence Posts*

64. The HA is aware of the concerns expressed by the BMF about the dangers that safety fence posts pose to motorcyclists in certain circumstances. The FEMA report “Final report of the Motor Cyclists and Crash Barrier Project”, February 2000, highlighted these risks to motorcyclists. It also noted the lack of hard data and stated that few published papers are really relevant to specific cases of motorcyclists and safety barriers. The HA is aware that there are a number of products that have been developed to reduce the effects of motorcyclists impacting with safety barrier posts.
65. The HA has introduced temporary attenuation measures to protect motorcycle riders from impacting on the safety fence posts on sharp bends where there is a poor motorcycle safety record. The HA and its maintaining agents are currently investigating what permanent attenuation systems are available. A German manufactured system that attaches onto the posts and provides a continuous sheet to the traffic face has been selected. If this system proves effective and does not adversely impair the function of the barrier, the HA will issue guidance on appropriate measures to reduce the risk to motorcyclists.

66. Additionally the HA is writing to European Road Directors to ascertain what lessons have been learnt in enhancing safety on the road. The HA will then seek to explore the remedial measures introduced and to establish best practice for successful implementation in the UK. The HA intends to raise the issue of motorcycle and Vehicle Restraint System (VRS) safety at the EN1317 CEN Standards Committee. This is intended to prompt discussion about the merits of adopting safety barrier post attenuation measures as an integral part of the standard. Extending the scope of EN1317 thus will provide the coverage of a standard for 'add on' protective devices for the benefit of motorcyclists enabling them to be developed and used in highway improvement schemes.

### *Manhole covers*

67. Whilst current manhole covers meet both British and European standards for drainage and skid-resistant surfaces this has not fully overcome the concerns raised by riders.
68. The British and European Standard is currently being revised to include a specific requirement for enhanced skid and slip resistance. The HA has also issued advice to designers to avoid locating manhole covers in the carriageway. This guidance provides advice on road layout and geometry and the geometric standards have been developed to take into account the requirements of all road users. In addition, Road Safety Audit emphasises the need for designers to consider all users when drawing up any new scheme or improvement project.

### *Safety Action Plan*

69. The HA has set out a five-year plan and programme of key actions, indicating their expected effectiveness and contribution to the road safety reduction plan targets. For England's trunk roads, the HA was set a target for reducing deaths and serious injuries on the National Road Network by one third, along with a target of a 10% reduction in the rate for slight casualties. These represent challenging targets for the HA to deliver.
70. Safety Action Plan initiatives will be monitored. The HA and its staff need effective and robust procedures to ensure that safety improvements and measures achieve the outcomes intended. It is intended that the Safety Action Plan will reflect the new role – as a network operator rather than as a road builder – given to the HA in the Integrated Transport White Paper.
71. Motorcycle riders have been identified within the Safety Action Plan as a key target user group that has specific requirements when using the Network. In order to achieve this the HA will continue to explore how it can develop closer partnerships with stakeholders on road safety in order to jointly deliver safer roads.

### *Speed related issues*

72. Trunk roads and motorways are designed to be used safely, within speed limits, by all road users. Warning signs are sited to give advance warning and mark hazards such as sharp bends where road users are expected to take the necessary action and reduce their speed. Amongst other things, accidents are caused by road users travelling at inappropriate speeds for the prevailing conditions and this will continue to need to be addressed through planned educational and enforcement initiatives.

### **Future initiatives**

#### *Manhole covers*

73. The HA accepts the concerns from road users regarding the skid resistance of manhole tops. Further work may be considered to measure the skid-resistance of solid-tops in use so that they can be related to the skid-resistance of the surrounding road surface. A revised Standard is likely to lead to some fundamental changes in the way skid-resistance of solid-tops are specified in the future and possible treatment to existing manhole covers.

#### *White lines*

74. The skid resistance of road markings is designed to be similar to the adjacent road surface and the skid resistance requirements of the HA fully meet British and European Standards. However the HA is aware of the concerns expressed by some motorcycle riders about the skid resistance of road markings and white lines. Recent information suggests that the issue may be the discontinuity of the surface or raised edge of the road marking or adverse camber created when completing road markings that is causing the potential for handling problems for motorcyclists. The HA intends to further explore this issue.

## **THE TASK FORCES**

75. DfT facilitators have led the Task Forces. But the outputs represent a collaboration by Task Force members, who were recommended by the AGM for their expertise and include both government and non-government representatives.

# VEHICLE SAFETY AND SECURITY TASK FORCE

## Introduction

76. The Task Force was established to investigate how motorcycles might be made safer and more secure by better design, and to consider improvements that could help motorcyclists in their safe use.
77. The Task Force ran in parallel with the industry led Motorcycle Crime Reduction Group (MCRG) (formerly the Motorcycle Theft Action Group) and the Home Office Vehicle Crime Reduction Action Team. To avoid duplication or overlap in the issues under consideration, the security aspect of motorcycles was not included in the Task Force's original work programme and has not been the main focus of its work. The Task Force has focused more on vehicle construction issues than security. Nonetheless, the Task Force maintained an active involvement in the MCRG due to the common participation of the same representatives in both groups.
78. Membership of the Task Force was extended in spring 2001 to involve a broader constituency of motorcycling interests. These included TfL, who brought to the meetings the views of a major urban transport provider, and the Vehicle Operator and Services Agency (VOSA – formerly the Vehicle Inspectorate), who monitor and enforce vehicle safety compliance through roadside testing and the MOT test.
79. The Task Force considered a range of issues raised by the members relating to vehicle construction. These covered Primary Safety (covering measures to reduce accidents) and Secondary Safety (covering measures aimed at reducing injuries). The Task Force sought to find agreed approaches wherever possible but, on occasions, this was not possible. This report of the Task Force work recognises the different views and recommends how they might best be resolved.

## Measures completed

### *Braking Systems*

80. Under current EU requirements, manufacturers are not obliged to fit Anti-lock Braking Systems (ABS) but many already do so. Systems have been fitted to larger or more expensive machines for several years and these are now starting to emerge on smaller and cheaper machines. Manufacturers are also fitting Combined Braking Systems (CBS), whereby front and rear brakes are applied by a single means of control, to certain new machines and some of these include ABS systems, while some do not.
81. These advanced systems distribute braking effort to front and rear wheels to improve the stability and safety under braking. Manufacturers believe that tailoring the brake system to the machine type and typical use patterns will achieve the most

rapid increase of vehicles with these systems. The Task Force recognised the safety benefits that these systems offer but the user representatives preferred to leave the decisions on vehicle specification to the purchaser rather than a mandatory or de-facto implementation by manufacturers.

82. A further issue was explored briefly concerning the training of motorcyclists in the correct use of advanced braking systems. The user representatives and retailers felt this was an important issue and could become increasingly so as the systems become more widespread over time. The Task Force agreed that there was no obvious solution other than to urge manufacturers to provide guidance in vehicle handbooks and for retailers to explain the system and its use at the point of purchase.

**Recommendation: that encouragement be given to the fitment of advanced braking systems and that manufacturers and retailers provide advice on the operation and use of the systems and implement appropriate dissemination routes.**

### *Security*

83. The Task Force noted a new initiative by VOSA concerning a check on the Vehicle Identification Number at the annual MOT test. The Task Force learned that a similar requirement had been included in the passenger car MOT scheme for a number of years and welcomed its introduction to motorcycles to help reduce crime.

## **Measures in hand**

### *Lighting*

84. Automatic (i.e. non switchable) application of headlamps on motorcycles is being fitted increasingly by manufacturers who are seeking to rationalise production to common global requirements. They say they are responding to market requirements where “automatic headlamps on” (AHO) is mandated for new machines or where “use” requirements specify headlamps-on during daylight hours.
85. The effect of this in the UK is a trend towards some new machines being factory fitted with AHO. The user representatives feel this is being presented to consumers as a fait accompli by manufacturers – thereby removing rider options and possibly undermining safety. However the machines affected by this are EU approved and so have access to the British market.

**Recommendation: that DfT seek to find a compromise solution through the UN-ECE in Geneva that would require machines to be fitted with an AHO override switch.**

### *Secondary Safety*

86. Secondary Safety is an area that could deliver improvements in rider safety. Certain aspects of machine design have been debated for a number of years but very little progress has been made. New innovative designs that entered the marketplace in recent years may have the potential to improve rider safety but these have failed to achieve a strong presence.
87. The two main areas where the Task Force was aware that considerable research has been undertaken are on leg protectors and air bag systems. Research to date on leg protectors is focused on the work done by the TRL in the late 1980s supplemented by complementary work from the motorcycle manufacturers at about the same time. These two research programmes drew conflicting results and this remains the current state of knowledge.
88. The Task Force recognised it could not resolve the issues concerning leg protectors but agreed that improvements to rider safety might be informed by EC collaborative research into motorcycle accidents. The MAIDS project is co-funded by industry, riders and the European Commission and should be completed in 2004. The scope of the project suggests that it will be one of the largest sources of information on motorcycle accidents available in Europe.
89. The potential of air bags to reduce injuries to motorcyclists involved in frontal impacts was accepted by the Task Force based upon earlier research. It was noted that a number of industrial and governmental stakeholders had contributed to developing suitable test procedures and assessment criteria and these are now being finalised through the International Standards Organisation. Once this work is completed, it is expected that airbag systems could follow into production. It has not proved possible, however, to predict the timescale for implementation on new machines.

**Recommendation: that the DfT collaborates with the Task Force members to review the MAIDS report and identify what future actions could improve motorcycle secondary safety.**

## *Safety Helmets*

90. A rider's crash helmet is one of the most personalised aspects of motorcycling. A wide array of colours, styles and structures are offered along with different levels of sophistication and comfort. Currently helmets must be approved to a British Standard or to UN-ECE Regulation 22.05. These tests ensure safety levels are preserved but the user representatives and retail sector highlighted the importance that correct helmet fitting to the individual has on safety.
91. The Task Force learned of an existing partnership approach between the user representatives and the retail sector to provide guidance to traders and consumers on correct fitting. In addition the manufacturers are developing a similar approach. The Task Force expressed its support for these initiatives.

**Recommendation: the Task Force supports collaborative initiatives already underway on safety helmet fitting guidance.**

92. The Task Force noted a feasibility study by DfT to assess the potential for a New Helmet Assessment Programme to help consumers differentiate between products. This work will build upon that already undertaken at EU-COST level seeking to develop an advanced standard for safety helmets. The Task Force welcomed this initiative but some members supported a cautious approach until the benefits could be quantified. The Task Force was also supportive of new research on helmet visors to explore the merits of new standards for photochromatic, gradient tint and other technologies.

**Recommendation: the Task Force broadly welcomes the DfT's initiatives on improved safety helmets and visors, and the feasibility study on a helmet consumer information programme.**

## *Security*

93. A new technology issue which the DfT is considering at a research level is Electronic Vehicle Identification (EVI). This work follows recommendations by the Jill Dando Institute<sup>2</sup> that identified EVI as a possible measure to reduce vehicle related crime. The Task Force noted the DfT's interest in this issue and that EVI could provide useful opportunities to reduce motorcycle theft. It welcomed initiatives in this area but the user representatives were concerned that the

<sup>2</sup> The Jill Dando Institute report "*Toward a First-Class Registration System for the United Kingdom*" dated 22 February 2002.

introduction of any system should be properly reviewed and the impact on civil liberties assessed fully and consulted upon.

**Recommendation: that research should continue into EVI but that civil liberty issues need to be properly considered and consulted upon.**

## Future initiatives

### *Replacement brake linings*

94. The Task Force considered this to be an important safety issue. Concern was expressed by the user groups that consumers were at risk of purchasing low quality products simply because the minimum levels of safety could not be guaranteed. It was recognised that this is not a universal problem as some retailers were diligent in supplying only good quality products, but cheap imported products were now increasingly available at varying levels of quality. Given the fundamental effect on safety that this situation poses, the Task Force was unanimous that a regulatory provision was necessary.

**Recommendation: that the DfT implements new regulations on replacement brake linings for motorcycles that establish minimum performance standards based upon UN-ECE regulation 90.01, and point-of-sale packaging, marking and labelling requirements.**

### *Tyre Safety and Consumer Awareness*

95. A very competitive market exists in Great Britain for replacement tyres and while the riders groups and manufacturers welcomed this, the Task Force recognised that it raised a number of safety issues. These can be categorised as follows:
- providing information to the consumer at the point-of-purchase; and
  - ensuring that only properly approved and marked tyres are used.
96. The Task Force reflected upon the change towards mail-order and Internet purchasing and the effect this may have on the traditional methods of providing information to consumers at local tyre retailers. Members felt the changing purchasing pattern raised new challenges that might not be immediately obvious to consumers.
97. The work of the Tyre Industry Council and DfT in publishing tyre safety leaflets was recognised, but the Task Force felt that these needed to be reviewed in the light of the changing market for replacement tyres, as did the dissemination route(s). The

Task Force agreed the key issue was getting information to the consumer irrespective of the purchase route. It was suggested that a suitable provision should be included in rider training and testing.

98. The Task Force briefly considered the issue of tyre marking. Currently all new<sup>3</sup> tyres are required to display an approval mark and the Task Force supported the new measures implemented on 1 January 2004 concerning safety standards and marking of retreaded tyres. The Task Force noted, however, anecdotal evidence that unmarked tyres are still finding a market in Great Britain – outside of the recognised dealer network. Increasing the enforcement of current regulatory measures would reduce this problem but given the potential for evading detection the Task Force felt a better approach would be to incorporate within the MOT test a check of the approval mark. The Task Force felt this would be an easy and effective measure to implement, would be cheap and apply to all machines. On this basis, the Task Force endorsed the proposal.

**Recommendation: that the motorcycling user representatives and the DfT engage with the tyre industry, motorcycle retailers and manufacturers to consider appropriate information and dissemination routes, and the changing marketplace; consideration be given to including tyre safety issues in the compulsory training syllabus, testing and other rider development programmes; and that the DfT makes new provisions in the motorcycle MOT test to check on tyre approval marking as a failure item.**

### *Rider Rearward Vision*

99. Motorcycle users have identified a problem with restricted vision provided by the rear view mirrors. The issue appears to exist across a range of mainstream models and design types so no early conclusions can be drawn. It was accepted by the Task Force that as the machines are likely to be correctly approved at EU level there is little that can be done to resolve this quickly. The Task Force agreed that the starting point was to compile a stronger evidence base before firm conclusions could be drawn and actions identified.

**Recommendation: that user representatives assemble a comprehensive dataset of motorcycle types/models, and rider experiences where rearward vision is restricted; and that the DfT review approval requirements for mirrors in conjunction with the UK approval authority and manufacturers.**

<sup>3</sup> A new tyre is a tyre used for the first time. It is not a retreaded tyre whether new or otherwise.

## *Lighting*

100. It is common practice nowadays for motorcyclists to drive with dipped beam headlamps during daylight hours in an attempt to raise their conspicuity in normal mixed traffic conditions. This practice sets the background for a long standing issue that “daytime running lamps” (DRLs) might be introduced on passenger cars – thereby reducing the exclusive visual impact motorcyclists believe they enjoy currently.
101. The DfT recognises the motorcyclists’ concerns and remains uncertain of the road safety benefits from the wider use of DRLs. New research currently being undertaken by the European Commission, expected to report in 2004, could provide a firmer evidence base and the foundation for new European legislation in this area.

**Recommendation: that the DfT, aware of the sensitivity of motorcyclists to daytime running lamps, review the Commission research to ensure any reported benefits are fully relevant to GB road and traffic mix conditions.**

## *Direction indicator tell-tale lamps*

102. An issue of general concern raised by the user representatives is the risk to safety from the placing of indicator tell-tale lamps outside of the rider’s normal field of view. There are design constraints on motorcycles that effectively exclude the use of steering column mounted self-cancelling devices that are commonplace on other vehicles. In practice this means that riders rely on the tell-tale lamps more so than drivers do. An added factor is that tell-tale lamps are an optional provision in EU construction requirements for motorcycles. This exacerbates the situation for motorcyclists and examples were noted where the tell-tales are located in relatively obscure positions – such as the top of fuel tanks – where riders would not be looking in normal traffic conditions.
103. The Task Force recognised that any improvements would be necessary at EU level and this could be a time consuming and complex process. It considered, however, that it was a sufficiently important issue to ask for research to quantify the safety risk. The user representatives agreed to participate in this to help gather data from users.

**Recommendation: that the DfT considers researching the safety risk associated with the siting of indicator tell-tale lamps in conjunction with user representatives and manufacturers.**

### *New Motorcycle Assessment Programme (NMAP)*

104. The success of the EuroNCAP system of rating cars for secondary safety is well known and recognised by consumers across Europe. The safety improvements resulting from this programme are clearly demonstrated by the higher rating achieved by newer models compared to equivalent models when testing began about seven years ago. Research is underway to extend this programme to primary safety (brakes, lighting, handling, etc.) and the Task Force welcomed this initiative due to its potential to improve car design to aid motorcycle safety.
105. The Task Force learned that the DfT is considering whether a similar system could be implemented to help inform motorcyclists on the safety performance of different motorcycles. Task Force members were keen to support initiatives to provide better consumer information but some user representatives were sceptical that a NMAP would deliver meaningful comparisons. They were also concerned about the scope of the scheme – especially where secondary safety issues were concerned. In a similar way, the manufacturers preferred a cautionary step-wise approach, and a voluntary process rather than mandatory. Nonetheless, the Task Force agreed that some exploratory work should be undertaken to assess the concept.

**Recommendation: that DfT should undertake a feasibility study to identify primary and secondary safety areas where realistic assessments could be made as part of a consumer information assessment programme.**

### *Security*

106. An issue that has arisen in MCRG is the apparent lack of progress with motorcycle anti-theft measures when compared to that for cars. While accepting that it was unrealistic to expect like-for-like improvements, the Task Force supported the MCRG conclusion that European legislation on motorcycle anti-theft should be reviewed and updated in the light of new and emerging technologies. The Directives affected by this are 93/33/EC and 93/34/EC – dealing with motorcycle Anti-Theft provisions and Statutory Markings respectively.
107. A further aspect of vehicle related crime is “vehicle ringing”. This is where the identity of a vehicle or motorcycle (often crashed or damaged) is transferred to another vehicle (often stolen). This process effectively legitimises the stolen vehicle in the marketplace and criminals have exploited this for many years. The Vehicle Identity Check (VIC) was implemented by the Department in April 2003 in an attempt to reduce “ringing” of passenger cars. The Task Force accepted that the scheme applied only to cars but is aware that the MCRG believe a VIC check for motorcycles could bring noticeable reductions in vehicle crime and should be pursued.

**Recommendation: that DfT reviews Directives 93/33/EC and 93/34/EC relating to Anti-Theft and Statutory Markings for motorcycles; and that DfT considers extending the VIC to motorcycles.**

# INTEGRATION AND TRAFFIC MANAGEMENT TASK FORCE

## Introduction

108. Motorcycles and other PTWs are part of the traffic mix on all our roads. The proportion varies considerably, with the highest levels of PTW use generally found in larger urban areas. Relatively little attention had previously been given to any special needs of motorcyclists despite the fact that numbers have been increasing over recent years. A key issue for the Integration and Traffic Management Task Force was how to facilitate better provision for existing PTW users, irrespective of any policies to encourage their use.
109. The first strand of the Task Force's work, therefore, was to identify the practical advice and guidance needed to help highway authorities, employers and public transport providers to provide appropriately for PTWs in their plans, identifying the research and trials needed to support this advice. The Task Force also sought to identify examples of good practice and innovations in this area.
110. One of the issues for the AGM was whether policy towards motorcycling should be passive or whether it should promote motorcycle use on the basis of benefits claimed for reducing congestion and pollution. It was recognised that these claims needed testing and a second strand of activity for the Task Force was to make a start in trying to quantify the effects of increased PTW use on congestion.

## Measures completed

### *Motorcycle parking powers in Transport Act 2000*

111. Powers were included in the Transport Act 2000 to enable local authorities to install secure parking devices on streets and in their car parks. Previously there had been concern that such devices could have constituted unlawful obstructions in the highway. Local authorities now have unambiguous powers to provide secure parking for PTWs thereby helping to reduce the high level of theft.

### *Motorcycle Parking Traffic Advisory Leaflet 2/02*

112. Following the inclusion of powers in the Transport Act 2000, the Department, working with the Task Force, produced advice for highway authorities and other providers of parking facilities about the provision of parking for motorcycles. The advice was published by DfT in 2002 as Traffic Advisory Leaflet 2/02 "Motorcycling Parking". The leaflet sets out how the needs of users can be met effectively by making available high quality, secure and accessible parking for motorcycles, offering a source of practical information and drawing on the

experience of a number of UK local authorities. It is available from the DfT's Traffic Advisory Unit and the Department's website.

### *M4 bus lane*

113. At the time the Highways Agency (HA) made the M4 bus lane permanent, the traffic orders were modified to allow motorcycles to use the bus lane. Unlike all purpose urban roads, this bus lane has no pedal cycles or pedestrians in or adjacent to it and the issue was therefore simply one of potential safety benefits for motorcycles. Initial indications from monitoring by the HA suggest that motorcycle accident numbers and motorcycle side-swipe accidents are down since they were allowed into the bus lane, although further analysis is needed before statistically reliable conclusions can be drawn.

### *Analysis of Local Transport Plans*

114. The Task Force has tracked the extent to which motorcycle policies and measures have featured in the first preliminary and full Local Transport Plans (LTPs) and subsequent Annual Progress Reports. Policies relating to parking for motorcyclists, consideration of their use of bus lanes, and various safety related policies featured most frequently in the Plans. The LTP guidance for the first full LTPs included an expanded section on motorcycles. There was an indication of increasing interest between the preliminary and full LTPs and in successive years amongst authorities.
115. An analysis of the motorcycle elements of the first full LTPs was included in the AGM interim report. Among the motorcycle elements was the establishment of motorcycle user forums or other means for authorities to engage directly with motorcyclists. These included forums for individual authorities and across conurbations, as in the West Midlands. One of the issues this raises is how motorcycle forums can link with forums for other road users. Many authorities have broader stakeholders groups where this happens.

### *First studies of the congestion implications of increased motorcycle use*

116. The DfT commissioned a research project to carry out an initial study into the consequences of increased motorcycle use on traffic congestion on urban roads and the associated environmental and safety effects. It was quickly apparent that this is an under-researched area compared to many other aspects of transport. This first study established that:
  - there were benefits for those who switched from other modes to motorcycling, taking advantage of motorcycles' abilities to by-pass queues and reduce journey times;

- where public transport use was relatively low, and transfers to motorcycle were therefore likely to have come mostly from cars, overall levels of congestion reduced;
  - where public transport use is high, e.g. in Central London, most of the transfers are likely to come from public transport, leading to no overall reduction in congestion for traffic generally;
  - the overall environmental impact of a switch to motorcycling was estimated to be minimal for any realistic level of transfer. This was due to motorcycles only contributing a small part of the overall total. Any effects were therefore diluted by the effects of other traffic; and
  - without additional safety measures, a transfer to motorcycles would be likely to increase casualties.
117. All the above conclusions were inevitably qualified by the assumptions that had to be made in this work. This was, after all, the first substantial study of the impact of motorcycle use on congestion. Questions such as:
- whether secondary modal switch effects would change the conclusions e.g. if the capacity on public transport released by transfers to PTWs drew some people out of their cars onto public transport thereby reducing congestion;
  - whether the accident rate assumptions took account of the nature of journeys likely to switch, i.e. urban commuting; and
  - whether a breakdown of the PTW fleet would affect the conclusion on the environmental impact to any extent.
118. The study concluded that further work would be needed to test the conclusions in a more robust manner. For example, the Advisory Group notes that in London, increased levels of motorcycling have not been reflected in a pro rata increase in motorcyclist casualties as some expected, arguably linked to TfL's developing a package of positive motorcycle measures.

## Measures in hand

### *Motorcycles in Bus Lanes*

119. The Department's present advice on bus lanes, "Keeping Buses Moving" Local Transport Note 1/97, recommends against motorcycles normally being allowed into bus lanes. The arguments about other vehicles using bus lanes usually revolve around the reduction in benefits thereby caused to buses. This is not an issue with PTWs. But there has been a longstanding concern about conflicts with cyclists, who are usually permitted to use bus lanes, and to some extent pedestrians also. For cyclists the concern stems from the differential speeds of cyclists and PTWs, given an open bus lane, and the lower visibility of PTWs compared to buses, giving rise to

at least the perception of greater risk and a less attractive cycling environment. For pedestrians, higher speeds and lower conspicuity underlie perceived safety concerns.

120. Nevertheless, a number of authorities have allowed motorcycles to use bus lanes. And it has to be acknowledged that motorcycles do use other bus lanes even when they are not permitted to do so. To date there has been no evidence of increased accidents to substantiate the perceived higher risks associated with allowing PTWs into bus lanes. But this has not assuaged the cycling supporters' concerns.
121. Those who argue in favour of allowing PTWs consistent access to bus lanes point to the lack of any conclusive evidence of this causing an accident problem. They suggest that cyclists would be more at risk from large buses than smaller PTWs. Furthermore, they claim potential safety benefits if PTWs are able to use the lane to get to the front of a traffic queue, rather than filtering through the traffic queuing alongside the bus lane, or go down the outside of the queue close to oncoming vehicles. They also contend that a PTW in a bus lane is more visible to pedestrians than when it is filtering through stationary and slow moving traffic.
122. The present situation is unsatisfactory as views on allowing PTWs more regularly into bus lanes tend to be polarised, and based on perceptions rather than empirical data. In order to get a better evidence base on which to take decisions, the Department has commissioned its own research, and worked with TfL on a parallel study, to see if the effects on different road users could be assessed and, if necessary, the policy subsequently reviewed.
123. In London, TfL studied three pilot corridors: A41 Finchley Road; A13 East India Dock Road; A23 Brixton Road. The sites went live in autumn 2002. Before and after monitoring was designed to assess safety, speed, journey times and lane usage. Although the results have been generally satisfactory, the monitoring period has been extended in order to collect more data and come to firm conclusions. TfL is also considering extending the trials to additional sites.
124. Two arterial corridors in Swindon were also studied by TRL Limited – Queens Road and Cricklade Road. Similar before and after studies were carried out and the video data is being analysed.
125. The situation to date remains, therefore, that the research tends to indicate no increase in accidents from allowing PTWs to use bus lanes, although it is not conclusive on the impact. The Task Force would like to see the position clarified and suggests that research is continued and extended in order to arrive at an unambiguous position that is acceptable to all parties. The motorcycle and local authority interests on the Task Force would like the Department's advice to be amended to at least a neutral rather than a negative position, without waiting for further research.

**Recommendation: the Government should review the negative position in “Keeping Buses Moving” on allowing motorcycles to use bus lanes, to adopt a neutral stance on the issue. Results of research can inform further revisions of this advice.**

### *Advice on providing for motorcycling in highway and traffic engineering*

126. The Task Force identified a gap in advice available to highway and traffic engineers about the particular requirements for providing safely for motorcycles on the road network. While it is true that in most areas of highway and traffic engineering provision for traffic generally will cover motorcyclists, there are some particular needs for PTWs that need to be taken into account e.g. not placing steel manhole covers where motorcyclists are likely to be cornering sharply, not locating road humps where motorcyclists are likely to be cornering or where such placing is likely to cause conflict with oncoming vehicles.
127. The Institution of Highway Incorporated Engineers (IHIE) is leading a group to produce guidelines to fill the gap. The Task Force fully supports the IHIE’s work. Members of the Task Force are represented on the Steering Group and are providing resources for the work. The guidelines should be published later in 2004.
128. In the course of producing these guidelines, it is likely that gaps in knowledge will be found. While it may be possible to draw on overseas experience, as well as from this country, further research needs may be identified.
129. The guidelines mentioned above will be particularly targeted at local authority roads. The HA provides for motorcycles on the motorway and trunk road network.

**Recommendation: advice to local authorities on providing for PTWs on the road network should be published as soon as possible and kept up to date as knowledge develops through research and experience.**

### *Advice on provision for motorcycles in Travel Plans*

130. The Task Force considers that PTWs can have a role in Travel Plans produced by employers to reduce the amount of road traffic they generate, especially but not exclusively for employees. The Task Force has studied a sample of 27 Travel Plans from the public and private sectors to find out what, if any, provision has been made for motorcyclists. Examples were found of employers that provided staff with pool scooters and some with targets to increase the amount of people commuting to work by PTW. However, a quarter of the Plans made no reference to PTWs at all. If

sufficient examples can be collected, the Task Force would wish to publish this as a Good Practice leaflet. The Task Force considers that Government Departments, Executive Agencies and Local Government sites should be encouraged to set good examples with their Travel Plans and recommendations to the public in schemes like TravelWise.

**Recommendation: Government guidance and individual Travel Plans should be reviewed to ensure that it adequately recognises and incorporates the role that PTWs can play in Travel Plans.**

### *Research into Advance Stop Lines for motorcycles*

131. The provision of advance stop lines (ASLs) for cyclists at signal junctions is now widespread. They are intended to provide a safe location for waiting pedal cyclists, especially those wishing to make a right turn at a junction. The Traffic Signs Regulations and General Directions 2002 clarified the legal position of such ASLs. In essence it is an offence for other vehicles to cross the first stop line and wait in the reservoir between the stop lines, except if unable to stop safely otherwise.
132. Motorcycle representatives have sought to allow the shared use of ASLs by motorcyclists as well as cyclists. However, this has raised concerns – even more so than over bus lanes – amongst the cycling community. They have argued that by allowing the shared use of ASLs, the facilities would no longer be being used for the purpose for which they were intended. Cyclists consider that motorcyclists are less vulnerable than them and do not need priority measures. Furthermore, they comment that the shared use of ASLs would detract from the convenience and safety of making a trip by bicycle.
133. The DfT therefore commissioned research to look at the effects of allowing motorcyclists to use ASLs in a number of trial sites. The trials are taking place in the London Borough of Newham. TRL were appointed to monitor these sites using before and after video surveys. These focused on the behaviours of cyclists and motorcyclists and the implications for safety. Attitudinal surveys of cyclist and motorcyclists were also undertaken.
134. The surveys showed that there is already significant illegal use of ASLs by PTWs, as there is by other vehicles. Whilst conflict between pedal cycles and motorcycles was not identified as a problem, the trial sites only provide a limited range of conditions. In particular, the bicycle flows were not high and they were making few right turns where they could come into direct conflict with PTWs that would generally wait on the right hand side of the reservoir. The trials highlighted a number of design issues regarding the shared use of ASLs, especially the provision of separate filter lanes for

PTWs providing direct access to the protected area. There were particular concerns with motorcyclists rejoining other traffic as the signals change.

135. The Task Force agreed that further work is needed in this area, both to look at the design aspects raised by the first sites and to extend the trials to other sites to cover a wider range of conditions, for example a greater number of cyclists and more turning movements.

**Recommendation: the DfT should continue research into the use of ASLs, encouraging further sites in different situations for trials, and consider the policy of allowing PTWs to use ASLs in the light of that research.**

### *Further research into motorcycling and congestion*

136. The DfT's initial congestion research highlighted the sensitivity of results to assumptions about transfers between modes. The DfT commissioned a follow up project to investigate this aspect in more detail. The objective was to build a mode choice model incorporating the important factors affecting the choices between motorcycles and other modes. The model will be used to look at a wider range of policy options, including those targeted specifically at PTW use.
137. The results so far indicate that the main factors affecting ownership and size of motorcycle are income, household type, gender, occupation and age. Also, that costs, weather, journey length, security, and public transport options are significant factors in choosing PTWs for trips. But there is a significant proportion of PTW users who would not change regardless of the circumstances. The modal choice model is being incorporated into a model for Cambridge and one for London and the South East in order to analyse the effects of a range of the policy tests.
138. The Task Force welcomes the development of techniques to improve the ability of transport planners and engineers to assess the impact of policies on PTWs. But to gain most benefit the results need to be made known to those able to apply them in a wide range of circumstances.

**Recommendation: the results of the follow-up congestion research should be widely disseminated. Where appropriate, policies at national or local level should be reviewed in the light of any robust conclusions that emerge. Consideration should be given to following up any further research that is identified.**

### *Related research at Southampton University*

139. Although not directly part of the Task Force's work, the Task Force has been following research being carried out at Southampton University which has also been looking at the factors that determine PTW use. As part of the work a self completion questionnaire was completed by over 8000 PTW users, covering their personal profile, what type of motorcycle they ride and the triggers that started their motorcycling, the sort of trips they make and the mode they previously used, and measures that could assist motorcycling. The results of this work will help build greater understanding of the issues surrounding motorcycles and modal choice.

**Recommendation: that DfT monitors progress of the Southampton University research into the factors that determine PTW use.**

### *PTWs in Local Transport Plans*

140. The Task Force has continued to monitor the Annual Progress Reports of local authorities' LTPs to see whether the incorporation of PTW policies and measures has continued. The Task Force will also be looking towards the inclusion of appropriate coverage in the guidance to be published in 2004 for the second round of 5 year LTPs, to be delivered in 2005 for start in April 2006.

**Recommendation: the second full LTPs should include appropriate provision for PTWs.**

### **Future initiatives**

#### *Developing better analytical tools to facilitate mainstreaming of motorcycling*

141. Some areas of transport planning have benefited from decades of study and research into analytical techniques and engineering measures. However because the proportion of motorcycling in traffic has traditionally been low, this mode has not generally been dealt with explicitly. If motorcycles are to be brought more into the mainstream and considered as another mode alongside cycling, public transport, walking etc., better tools will be needed to enable the effect of different policy options to be assessed.
142. The two research projects into motorcycling and congestion, mentioned above, are first stages in this process. Other issues remain to be considered more fully, including how best to deal with PTWs within traffic models, and testing the robustness of conclusions about the safety and environmental impacts when trips and vehicle types are disaggregated, as well as the conclusions so far on mode

choice. While some of these questions may be addressed by work of the other Task Forces, further research will be needed. Motorcycling has a long way to catch up in having the means to carry out such analyses. This is an area where the research institutions may be able to contribute.

**Recommendation: techniques should be developed to allow PTWs to be mainstreamed into the transport planning process.**

### *Motorcycling as part of Multi-modal Journeys*

143. The analytical work of the Task Force has largely dealt with motorcycles when they are used for the whole journey. However, motorcycles may also be used as part of a multi-modal journey, especially in combination with rail. It is not clear how big a market there is, or could be, for this, what the implications might be for wider transport policies, and how serious are any barriers that discourage such multi-modal journeys. It is an area that would benefit from further work and could be one strand within the overall mainstreaming of policy and technical analysis of motorcycle use. However, in the meantime there are probably examples of good practice in the provision of facilities for PTWs at transport interchanges which it would be worth collecting and publishing for wider dissemination.

**Recommendation: further investigation of PTWs' role in multi-modal journeys is proposed, including the collating of existing best practice.**

### *Relationship between road users*

144. The Task Force recognises that there remains a concern about mixing PTWs with cyclists and pedestrians and that this has given rise to entrenched positions on some topics. The Task Force is keen to promote both dialogue with other groups of road users and research in areas of disagreement so that discussions can be based on evidence.

**Recommendation: potential or perceived conflicts between PTWs and other road users should be properly explored and conclusions should be based on evidence.**

145. The Task Force's work led to an overarching recommendation.

**Recommendation: consideration for motorcycles and other PTWs should be “mainstreamed” in the planning and implementation of transport policies and road infrastructure and management. PTWs are part of the traffic mix and are being used for an increasing number of journeys in recent years. The implications of and for motorcycling should be considered, where appropriate, alongside other modes by highway and traffic authorities, by transport interchange and car park operators, and by planning authorities and developers.**

# ENVIRONMENTAL AND FISCAL TASK FORCE

## Introduction

146. The formal terms of reference of this Task Force were “to explore the environmental impact of motorcycles and to agree what measures, if any, should be taken in light of the conclusions of the Group”. The Task Force subsequently added to its remit the effects of fiscal policy on the use of PTWs and purchasing preferences of motorcyclists.

## Measures completed

### *Emissions Performance of Motorcycles against cars*

147. Preliminary conclusions about exhaust emissions of PTWs were contained in the Advisory Group’s Interim Report in 2001. Broadly, that concluded that PTWs:
- in terms of climate change performed better than other vehicles in producing less carbon dioxide (CO<sub>2</sub>) per passenger kilometre;
  - in terms of pollutant emissions produced a lower volume of oxides of nitrogen (NO<sub>x</sub>) per passenger kilometre; but
  - in terms of pollutant emissions performed less well than other vehicles in relation to carbon monoxide (CO) and hydrocarbons (HC).
148. All PTWs have been subject to controlled pollutant emission standards since 1999 under EU Type-Approval, when Stage I for new models, derived from a drive cycle originally designed for cars (Modified Car Test Cycle) was introduced. Stage II emissions limits for all new motorcycles were introduced in 2003. Since 2001 changes have been proposed and agreed across Europe for the regulatory testing regime which will apply when Stage III limits are introduced for all motorcycles in 2006/7, with the intention of subjecting them to similar emissions limits to those currently applying to new passenger cars (but by 2006 cars will have moved on to Euro IV). The World Motorcycle Test Cycle is intended to adopt a more appropriate “real world” drive cycle that is expected to give more realistic data on emissions from PTWs than the old drive cycle.
149. Early results from measurements using this improved test cycle were presented to the Environment & Fiscal Task Force in July 2003. At that time, the view was that compared with motor cars the findings suggested that PTW performance:
- was better as regards CO<sub>2</sub>;
  - was favourable in terms of NO<sub>x</sub>; but
  - noticeably worse in respect of HC.

150. An important caveat to the findings is that the total sample of motorcycles was small and was broadly spread across the capacity range – a larger study would be required to improve confidence in the results.
151. Under the current Stage II pollutant emissions limits, motorcycles are approximately one Euro (emission) standard behind passenger cars in their environmental development. This has been achieved by more efficient engine design, fuel injection to improve fuel metering, air injection in the exhaust stream and simple catalytic converters. There is room for further improvement with further technology. It is recognised that the motorcycle industry and its market is smaller than that of cars and this can affect the rate of technological change. Nevertheless there are indications that Stage III emission standards for motorcycles, that will enter into force in 2006-07, will see changes that are already commonplace in passenger cars. This will include the phasing out of carburettors in favour of fuel injection systems to achieve more efficient combustion leading to reduced HC and CO emissions and greater use of closed loop catalytic converters which generate a reducing reaction addressing NO<sub>x</sub> as well as oxidising reactions to ensure the complete combustion of HC and CO. It should be noted that closed loop catalytic converters which require a stoichiometric mix are likely to increase fuel consumption and CO<sub>2</sub> emissions.
152. As a result of these findings and subject to the caveat in paragraph 150 above, the Task Force concludes that PTWs, through lower energy requirements, use less fuel and emit far less CO<sub>2</sub> than cars. In terms of pollutant emissions, they emit less CO and are likely, from 2006/7 onwards, to be emitting less NO<sub>x</sub> and about the same volume of hydrocarbons. Taken as a whole based upon the above, the emissions performance of motorcycles is seen to be better than cars. It was also noted that emissions limits are part of the European Union's institutions' competence on which the Task Force can have little bearing.

### *Noise*

153. The Interim Report referred to difficulties in enforcing the noise standards relating to PTWs. In the past “noisy exhausts” were a frequent source of complaint to the police but although regulations defined permitted noise limits it was difficult to enforce without special equipment unavailable to police patrols. The position today is largely resolved. All new motorcycles must be fitted with exhaust systems and silencers stamped (“E-marked”) with the European Directive with which they comply. Under regulations derived from the Motorcycle Noise Act 1987, replacement exhaust systems and silencers subject to a BS-AU or E-mark stamp may be fitted. They are usually favoured over original equipment by riders since they are often better value, of improved appearance and allow engines to operate more efficiently. Most aftermarket suppliers produce road-legal exhaust systems and silencers in their range. Some riders choose to fit replacement, non-compliant pipes intended for racing or off-road use. All such ‘race cans’ are now stamped “not for road use” (NFRU) and are illegal on public roads, facilitating enforcement by the

police. Such non-compliant systems and end cans would fail an MOT test inspection. In addition, the supply of any exhaust system or silencer not permanently marked NFRU or with a road legal stamp is an offence enforced by local authority trading standards departments. The Motorcycle Retailers Association (MRA) produced a “declaration form” to be signed by customers and retained by the retailer whenever non-conforming pipes are purchased so that the customer is fully aware that such accessories are not legal on public roads.

**Recommendation: the Task Force believes that concerted action to address the use of illegal exhaust systems and silencers is required. There should be a campaign to win the hearts and minds of riders to use compliant exhausts since the alternative may be more draconian action such as a requirement that illegal exhausts should be surrendered as part of the process of discharging a rectification notice.**

### *Vehicle Excise Duty Restructured for PTWs*

154. Between 2000 and 2001 the Chancellor introduced a series of changes in Vehicle Excise Duty (VED) for cars, designed to encourage people to run smaller cars that are generally more fuel efficient. A similar exercise was undertaken for PTWs in 2002, designed to relate VED more closely to engine size and to give the benefit of lower VED rates to smaller, more economical machines. Treasury officials attended a workshop arranged by the Task Force and took into account the views of members in restructuring VED rates. The results are tabulated below.

#### ***PREVIOUS STRUCTURE***

Engine Size	Annual VED (£)
Up to 150cc	15
151cc–250cc	40
250cc	65

#### ***NEW STRUCTURE INTRODUCED IN 2002***

Engine Size	Annual VED (£)
Up to 150 cc	15
151cc–400cc	30
401cc–600cc	45
601cc and over	60

## *Value Added Tax*

155. The Task Force also discussed with Customs and Excise representatives the prospects of exempting safety items such as gloves, boots, motorcycle clothing and security equipment such as alarms, immobilisers and secondary locks to a lower rate of VAT from the standard 17.5%. However, this is a European Commission responsibility and during a review of the EC VAT Directive conducted in 2003, it was reluctant to include these items in Annex H for items which can be subjected to a reduced rate of VAT. In attempting to harmonise VAT arrangements across Europe, the Commission also wanted to abolish the UK derogation in which a reduced rate (zero) is applied to helmets. Following further discussions with Customs & Excise on progress in harmonising VAT arrangements across Europe, the prospects of expanding the reduced rate class in the United Kingdom appeared remote. The Chancellor has indicated however that he has no intention of allowing VAT to be applied to important areas of goods, including children's clothing in the United Kingdom and the assumption should be that safety helmets for PTWs will remain subject to a reduced rate of VAT.

**Recommendation: while recognising the EU position on subjecting further items to reduced rates of VAT, the Advisory Group nevertheless seeks the support of the UK Government and its EU partners for the motorcycle community in its efforts to achieve reduced rates of VAT for protective clothing, visors, security equipment and rider training.**

## **Measures in hand**

### *VED Evasion Among PTWs*

156. The Task Force discussed VED evasion in the light of a DVLA roadside survey published in 2003 which showed that, despite reductions in VED as tabulated above, evasion had remained at the same levels as the 2000 survey at 25% for PTWs.
157. The DVLA is reviewing options to improve the security of tax discs for PTWs. In the meantime it was noted that the introduction of Continuous Registration for all vehicle keepers should reduce VED evasion. On the insurance front, Professor David Greenaway has conducted a review of motor insurance arrangements in the U.K. Several members of the Task Force gave evidence to Professor Greenaway on how insurance costs affected PTWs. Professor Greenaway's report, together with the Government's response to the recommendations, was published on 14 July 2004.

## **Future Initiatives**

158. The Advisory Group believes that the Government should consider what fiscal mechanisms could be employed to encourage riders to take post-test training. For example, exemption from or a reduction in VED for riders who have undertaken further training.

# STATISTICS TASK FORCE

## Introduction

159. The Statistics Task Force was set up to explore the statistical information on PTWs collected and disseminated by DfT; to look into any areas where the information is misunderstood or deficient; and to consider how the statistics could be improved.

## Measures completed

### *Availability of statistics*

160. In the course of its work the Task Force examined statistical information available from a variety of sources, not just official statistics from the DfT. It concluded that there would be value in bringing the key statistics together into a single document. This has led to the development of a Compendium of Motorcycling Statistics. The compendium will cover statistics on motorcyclists; motorcycles; journeys made; and motorcycle safety.

**Recommendation: that the DfT should publish a Compendium of Motorcycling Statistics in 2004 and maintain a web version that should be kept up to date as new information becomes available.**

### *Traffic estimates*

161. Concerns had been expressed that the official DfT statistics on motorcycling traffic up to 2002 understated the level and growth in motorcycling in recent years. It was suggested that the automatic traffic counters that provide one of the main inputs to the traffic figures may not cover the full width of the road and therefore some traffic may be missed. DfT clarified that this would not occur. However, it is acknowledged that there may be deficiencies in the sample of manual traffic count points on minor roads, and further work is needed on this (see paragraph 171 below).
162. During 2001 and 2002, better information became available about road lengths (for all road classes), and about traffic flows on HA roads. This new information, together with methodological improvements, was used to revise estimated levels of road traffic in Great Britain, for all vehicle types, back to 1993. The revised estimates show higher growth in motorcycling traffic over the last few years than shown by the previously published figures. It is now estimated that motorcycling traffic increased by around 28 per cent between 1993 and 2001, rather than 18 per cent as previously estimated. It is estimated that in 2002, motorcycling accounted for more than 5 billion vehicle kilometres.

### *Motorcycle stock statistics*

163. The Task Force considered several issues relating to statistics of the stock and new registrations of PTWs. Initially these were concerned with reasons for differences in estimates of new registrations. DVLA based figures tended to report higher levels than the MCI due to the ways in which the systems recorded new registrations. However this difference has fallen considerably in recent years. It has long been recognised that motorcycle stock is seasonal and that high levels of VED evasion affect the licensed stock. The DfT now regularly publishes a quarterly series in its annual publication, Vehicle Licensing Statistics, and provides users with interpretation to enable them to make the best use of the figures. This approach is also to be used in the Compendium referred to above.

**Recommendation: seasonal licensing data is welcomed and the DfT's published statistics of the stock of PTWs should continue to show quarterly profiles within the year to take account of the seasonality of the licensed stock.**

### *Casualty statistics*

164. The Task Force's consideration of casualty statistics focused on three areas: under-recording of accidents; the classification of severity of injury; and the need for information on the factors that contribute to an accident. The Task Force's concerns fed into the recent Quality Review of road casualty statistics.
165. The official road casualty statistics show that motorcycle riders and passengers face substantially greater risk of injury than users of other motor vehicles. These statistics come from information on road accidents involving personal injury which become known to the police. While this covers virtually all fatal accidents, research studies have shown that an appreciable proportion of non-fatal injury accidents are not reported so there is likely to be some under-recording of casualties amongst all road user groups. Members of the Task Force consider that it is important for publications to give sufficient information on the extent of under-recording. A research report entitled "Comparison of hospital and police casualty data: a national study" was published by the Transport Research Laboratory in 1996 [TRL Report 1731] and an article covering the main points was published in the 1996 edition of "Road Accidents Great Britain: The Casualty Report". A summary of the position is included each year in the Notes section of the publication. The Quality Review has recommended further work in this area, which is now underway.
166. The classification of severity of injury has been defined to enable police officers to make a determination at the scene without reference to medical data. There can be difficulties in distinguishing between serious and slight injuries and studies have shown that police are more likely to underestimate the severity of casualty. This

issue was considered in the Quality Review and in particular, there was a proposal that an additional question be included to ask whether the casualty attended a hospital. This was rejected as in some areas hospitals will not release information about whether a casualty was admitted to hospital because of privacy laws, especially if the casualty has not been involved in a crime. Therefore, it is impractical for a policeman taking a report of an accident to follow up every casualty after the event.

167. There has been interest in collecting information on the factors that contributed to an accident for a long time, and almost all police forces do collect this information, but not in a consistent way. Previous attempts to establish a single consistent approach have failed. In the recent Quality Review, however, police forces and local authorities demonstrated a high degree of commitment and reached agreement on a common system. The new approach will be adopted nationally from January 2005.

### *Motorcycle theft*

168. The Task Force was involved in a Home Office led project to develop a motorcycle theft index, to show the relative risks of theft of different types of motorcycles, by comparing police data on thefts with DVLA data on stock. This largely involved DfT staff working with the Home Office and DVLA to ensure that correct interpretations of stock data were used in the derivation of the indices, but the Task Force also contributed some presentational ideas. This work led to the publication in November 2002 of new statistics of car and motorcycle theft, revealing that motorbikes are nearly twice as likely to be stolen than cars, with newer scooters, mopeds and motorbikes with a smaller engine capacity most at risk. The theft index is available online at [www.secureyourmotor.gov.uk](http://www.secureyourmotor.gov.uk).

### *Journey purpose*

169. The main source of journey purpose information is the National Travel Survey. This household survey collects a week's travel information from about 3000 households a year. However for comparatively rare modes such as motorcycling this produces a small sample. The need for better estimates for motorcycling was one of the arguments presented in the course of a review of the Survey and the relevance of its results to current transport policy concerns. As a result of this review, the sample size has now been doubled.

## **Measures in hand**

### *Motorcycle stock statistics*

170. Following from the work described in paragraph 163 above, there has been considerable interest in trying to arrive at a commonly agreed description and classification of motorcycle stock by body type. The DfT has been limited by the

variables held on its database from the DVLA and can therefore only categorise stock in terms of engine size. The MCI, however, uses an additional classification based on the 'style' or body type of motorcycle distinguishing, for example, scooters from touring bikes, etc. For some time, it has been the aim of the Task Force to develop a match between the two data systems so that DVLA models could be ascribed a MCI category. The MCI has now completed work to modernise its new registration reporting systems and to allocate unique codes for each model of machine on both the MCI and DVLA systems.

**Recommendation: that the DfT and the MCI should continue to develop motorcycle stock classification with the aim of adopting the body type classification in published statistics.**

### *Minor road traffic counts*

171. Paragraphs 161 and 162 reported some completed work on traffic estimates, including the reworking of data from 1993 to 2002 to produce revised estimates. Apart from data from automatic traffic counters, the other main input to the traffic estimates comprises data from manual counts of vehicle flows at selected points on the road network. While all major road links are counted, minor road counts are only taken at a sample of points. This sample tends to be concentrated on roads that carry relatively high levels of motor traffic generally. However, insofar as motorcyclists tend to avoid the busy major roads in favour of quieter minor roads, the sample may not be very efficient for producing motorcycle traffic estimates. The DfT will investigate ways of improving the sample of these types of road in order to make it more representative for all traffic types. This work will form part of the Quality Review of traffic statistics starting in January 2004.

**Recommendation: that the Quality Review of road traffic statistics should include consideration of the manual traffic count sample sizes and distribution across road classes needed to produce robust estimates for all vehicle types, including PTWs.**

### *VED evasion*

172. It is known that the level of VED evasion amongst motorcycle owners is very high. The 2002 VED evasion survey, published in March 2003, estimated that 25% of the motorcycle stock in active use in Great Britain was unlicensed. Full details of the report are at <http://www.transtat.dft.gov.uk/tables/2003/ved/vede02.htm>. Such estimates come from regular surveys conducted by the DfT for DVLA. Roadside observers take note of the registration marks of vehicles that pass, and these are then compared with DVLA records of licence status for those vehicles. Special attention

is given to less common vehicle types including motorcycles in an attempt to establish a sufficient sample size. Recently these surveys have been carried out every three to five years but they will be conducted annually from 2004. The Department will also be investigating other ways to supplement the surveys, for example by analysing 'gaps' in licence history, to track changes within the year between surveys.

## Future initiatives

173. A number of developments in the fairly near future will offer significant opportunities for getting new information about motorcycles and motorcycling. The Task Force has already identified two specific developments which officials in the DfT are actively pursuing. The computerisation of the MOT testing procedures will in time yield valuable new data on the mileage undertaken by different makes and model of motorcycles, by linking the MOT records to the DVLA records for the vehicle. And the DfT is working with the Association of British Insurers to investigate linking their data on insured vehicles with information from the DVLA record.
174. The Statistics Task Force noted the work of the Environment and Fiscal Task Force on the issue of emissions of PTWs compared with cars, and in particular, the early results of emissions measured using the new World Motorcycle Test Cycle. Further work is needed in this area.
175. Recent years have seen significant changes in rider licensing and training regulations and the Task Force agreed that further work was needed to develop the relevant statistics.

**Recommendation: that the DfT should continue work on data relating to mileage, VED evasion, licensing and training and incorporate new information into the web version of the Compendium of Motorcycle Statistics, as it becomes available.**

# RESEARCH TASK FORCE

## Introduction

176. The Research Task Force of the Advisory Group on Motorcycling was established with the aim of identifying the research required to better inform future policy decisions. The Task Force provided advice on the development of a programme of research with the objective of improving motorcyclist safety, and members also provided advice on ongoing research projects as well as comments on completed reports. The Task Force's remit covered the motorcyclist in terms of accident liability, behaviour, training etc., but did not extend to vehicle safety issues which were included in the work of the Vehicle Safety and Security Task Force.
177. The starting point for the discussions was the scoping study on motorcycle safety, which was prepared for the DfT's Road Safety Division by the Transport Research Laboratory (TRL). This study provided a review of work done to date and identified areas where further research was needed [TRL Report 581 2003].
178. Accident causation, training, and analysis of accident risk were identified as priority areas for research. A list of projects to be included in the first stage of a new programme of research on motorcycle safety was agreed and set in progress. Five projects have been completed.

## Measures completed

### *Analysis of Police Fatal Motorcycle Accident Reports [TRL Report 492 2001]*

179. The TRL collects police files on fatal accidents for research purposes once all police and court proceedings are completed. The files contain a great deal of information about the accident causation and circumstances which is additional to that collected in the STATS 19 Accident Reporting Database.
180. The project was in two stages: a general analysis of the factors associated with fatal accidents involving PTWs and a more in-depth analysis of the most common accident types. This included analysis of contributory factors data in over seven hundred fatal accidents that took place between 1986 and 1995, the majority from 1992-1994. Due to the time delay in TRL being able to obtain police files, more recent data may differ from the findings of this report. For instance urban single vehicle accidents seem to be over-represented and crashes involving cars in urban locations and single vehicle accidents on rural roads may be under-represented.

181. Main conclusions:
- 41 per cent of the accidents involved a collision between one or more cars and a motorcyclist, and 29 per cent were single vehicle accidents;
  - about half of the motorcyclists involved were aged 20–29;
  - two thirds of pedestrians involved in accidents with motorcyclists were aged 60 or over; in comparison about half the pedestrians involved in all fatal accidents are in this age range;
  - one third of single vehicle accidents were associated with excessive speed;
  - 60 per cent of the accidents involving cars or larger vehicles were considered to be principally the responsibility of the motorcyclist, in 44 per cent of the cases due to excessive speed;
  - the main problems with drivers were carelessness and thoughtlessness, or failure to judge the actions of the motorcyclist. Even in some accidents where motorcyclists were considered primarily responsible due to excessive speed, drivers contributed through lack of care; and
  - alcohol impairment was found to have a prominent role in the fatal and serious accidents for which riders were found to be responsible, the incidence being approximately twice as great as accidents for which others were thought to be responsible. However, this does not necessarily imply that riders are more willing than drivers to drink and drive, and coroners' data show that rider fatalities have similar or slightly lower blood/alcohol levels than driver fatalities. It does suggest that at any alcohol level riders are at a greater risk of an accident.
182. In summary, the key findings are that speed was a major contributory factor in fatal accidents, particularly in those accidents where the primary responsibility lay with the motorcyclist. Driver behaviour also contributed through carelessness and lack of awareness. Elderly pedestrians are disproportionately involved in accidents with motorcycles.

### *Scoping Study on Motorcycle Training*

183. Training was recognised to be an important safety measure and this project was commissioned from the British Institute of Traffic Education Research to review the content and practice of existing rider training courses, and to identify remaining gaps in knowledge and areas where further research would be needed.
184. The study found that the motorcycle training industry is very fragmented, with many one-man or small businesses, a wide range of qualifications held by instructors, many agencies providing training and a wide variation in courses offered. Most instructors are dedicated professionals, prepared to give time and support to their clients, according to clients' individual needs.

185. 60% of instructors offer only pre-test training, i.e. CBT and Direct Access, whilst a very small minority offer training only at Advanced level. Pre-Test instructors are required to be qualified and registered with DSA before they are allowed to operate for financial gain. Qualification and registration are not presently required for post-test instructors, including those training motorcycle instructors. Structured programmes are followed in over 50% of all training courses. 99% of organisations offering CBT and 95% offering Direct Access followed structured programmes. Most pre-test training is of an acceptable standard, but a minority of instructors highlighted shortcomings relating to quality and quantity of training provided, the current monitoring system and specifically the advanced notification of inspection visits given by DSA staff.
186. The research recommendation was that an area which might benefit from a more professional approach by trainers is an effective standardised system to record trainee progress. But more research is needed on training and this will be taken forward in the next stage of the research programme (see paragraph 217 below).

### *Older motorcyclists*

187. In recent years it has been apparent from trends in accidents that older motorcyclists are an increasingly important factor in the increase in PTW casualties. Research was commissioned from Leeds University to investigate why this is occurring and to explore ways to address the problem, with recommendations for countermeasures.
188. The research carried out two questionnaire surveys of motorcyclists. An ownership survey was sent to 5300 registered owners of motorcycles to identify any changing patterns in fleet characteristics and to examine the ownership characteristics of the current motorcycling population. The sample included motorcyclists of all ages. There was a 20% response rate with 1009 riders responding.

### **Ownership survey**

189. The first survey identified three distinct groups of motorcyclists based on the variables of age, experience and engine size. The first of these groups was characterised by older riders with an associated large number of years experience, riding machines with relatively large engine capacities. A second group were younger, more inexperienced riders with machines with lower powered engines. The third group, whilst characterised by intermediate age and experience, owned the largest machines. These groupings demonstrated that motorcyclists should not be characterised simply by their age, but that other factors are also important. The project specification emphasised the need to consider riders who had either returned to motorcycling after a break or who had taken up motorcycling at a relatively late age. To meet this aim, our sample (n = 1009) of motorcyclists were additionally categorised according to whether they were (a) new riders; (b) long-term riders; or (c) returning riders. This additional categorisation provided not only a measure of

experience but also whether this experience was built up consecutively or in stages. Riders were also categorised on the basis of the type of riding they engage in (leisure or commuting) in order to understand reasons for purchasing various types of machines.

190. Amongst the respondents to the survey, long-term and returning riders dominated ownership of the higher capacity motorcycles (e.g. sports, traditional and touring motorcycles) whilst new riders favour low powered mopeds and scooters. Those riders using their motorcycles for only leisure trips or both leisure and commuter trips tended to own larger, traditional, sports/touring machines, and the majority of these leisure riders were long-term motorcyclists and motorcyclists recently returning to riding.
191. Overall, 85% of the riders in the sample engaged in leisure rides. A good motorcycling route was defined as having wide sweeping roads with impressive views and little traffic, frequented on fine and dry days, usually at weekends. Half the sample also engaged in group rides at one time or another. Across all rider types, there was a definite seasonal influence with leisure trips peaking in the summer months. Returning riders, in particular, increase their presence on the roads between June and August.
192. A regression analysis suggested that those riding the higher capacity motorcycles tended to be male, long-term or returning, leisure only riders who have attended voluntary motorcycling training courses, drive a car, earn a higher income and fall into a higher socio-economic class.
193. Analysis of respondents' history of motorcycle ownership showed that those who have joined the activity more recently not only increase the engine size of their machines more steeply, but also more quickly. That is, there is a cohort of riders on the road who have progressed to large engine capacity machines relatively quickly, without the same build up of skill that previous cohorts may have had.

### **Risky riding survey**

194. A second survey examined the key psychological predictors of riders' intentions to engage in seven risky riding behaviours. The risky riding behaviours chosen had been identified as key predictors of accident involvement in the TRL multivariate study. Age only proved to be an important predictor of intention to engage in the speed-related behaviours. In common with research on car drivers, younger riders were more likely to intend to speed.
195. Past behaviour emerged as the most consistent, strong and significant predictor of intentions. Riders who have engaged in these behaviours in the past also are more likely to intend to do so in the future and conversely so. Attitudes and behavioural beliefs also consistently emerged as a predictor of intentions across most of the

risky riding behaviours. An example of a behavioural belief is “speeding does not increase my chance of being involved in an accident”. In addition, control beliefs (i.e. the perceived ease or difficulty of undertaking a given behaviour) also emerged as significant predictors of intentions in all the riding scenarios. For example, riders believe that if they do not keep up with the traffic, they will be “pushed” from behind.

196. Normative beliefs (social pressure) emerged as significant direct predictors of intentions in 5 out of 7 riding scenarios. All 4 reference groups (police, other road users, family and other bikers) emerged as groups that were perceived differently by intenders and non-intenders. Those not intending to engage in risky riding behaviours tended to want to comply with the wishes of these groups compared to intenders.
197. The research showed that age alone was not an adequate predictor of riding behaviour. Other variables such as experience and the types of riding they engage in together with bike size provided more insight into rider type. Similarly, attitudes and beliefs were far more important than age as a predictor of whether or not riders engaged in risky riding behaviour.
198. Recommendations from the report were that:
  - training should be tailored to meet the needs of a motorcyclist’s experience, bike preference and riding habits – not their age;
  - training regimes should highlight the inaccuracy of beliefs such as speeding not being related to accident liability;
  - interventions designed to change riders own evaluations of risky riding behaviours may prove to be an effective way to reduce the incidence of these behaviours in riders;
  - those riders who have returned to riding after a break should be encouraged to purchase motorcycles which are suitable to their experience, as opposed to their budget. Graduated licensing may be a way forward here;
  - training should emphasise the idea of the “safe rider” and encourage motorcyclists to approve of this stereotype;
  - media campaigns should encourage riders to think about the effect of an accident on their significant family members; and
  - providing riders with not only the skill but also the confidence to travel at their chosen speed, does not address the negative control beliefs regarding keeping up with others could be addressed.

## *Multivariate Analysis of Motorcyclists' Accident Risk Factors*

199. This research, commissioned from TRL, was undertaken in order to gain a deeper understanding of motorcycle accidents. The objective of this project was to explore the interacting influences of various factors upon the trend for motorcycle casualties, in particular examining the factors that have influenced the recent trends among motorcyclist casualties. The study carried out analysis of existing data sources, such as STATS19 and the National Travel Survey, and supplemented this data with a new survey of accident involved and non-accident involved motorcyclists. The data analysis assessed the influence of variables such as exposure, age and gender, alongside machine characteristics such as engine size, on accident risk, and investigated trends in motorcycle accidents over the last decade.
200. The survey explored the relationship between accident risk and variables such as mileage, age experience, engine size, journey type, training, personal characteristics, and behaviour and attitudes.
201. The data analysis showed that trends in casualties can be broadly explained in terms of changes in numbers and sizes of motorcycles and the mileage they cover. The KSI casualty rate per 100 m vehicle kms has been fairly stable over the past ten years, with a tendency to decline in the most recent years, but is still 30 times higher than that for car occupants.
202. The survey questionnaire was sent to 30,000 motorcyclists and 11,360 (40%) responded. Their mean age was 43 years, mean annual mileage 4677 miles, and mean experience was 15 years. Nearly half were aged 31–45, rode between 1000 and 4000 miles per year, and had 2–15 years experience.
203. 11% of males and 15% of females had an accident in the previous year, 44% of which involved injury to the rider, a third of which were serious. When asked about responsibility for the accident, in 57% of cases the rider was not felt to be at all to blame, 20% involved a little blame for the rider, and 23% of riders were quite a bit or entirely to blame. Riders admitted to blame in 36% of accidents in which the bike left the road without a collision, 41% of commuting accidents, and 29% when riding for pleasure, but in only 7% of accidents where another vehicle hit them. Three-quarters of accidents were minor spills and 39% were low speed manoeuvring.
204. Accident liability rises less than proportionately with mileage, and falls rapidly with increasing age, but to a lesser extent with experience. Moped and scooter riders have the highest accident rate and tend to be ridden by the least experienced riders in some of the densest traffic. Accident liability was not clearly linked to engine size other than that younger riders on smaller machines are over-represented.

205. The survey included questions on riding behaviour which covered traffic and control errors, speeding behaviour, stunt riding, use of safety equipment, pleasure derived from motorcycling, relative assessment of skill, beliefs about accident causation and riding style.
206. Self-reported errors most consistently predicted accident liability. Many of the errors are linked with a careless, inattentive riding style, failure of hazard perception and control skills. The errors are linked to underlying riding styles which tend towards violational behaviour because they depart from the good normative rules of safe riding. Riding style, getting pleasure from motorcycling, and liking for speed predict behavioural errors that predict accidents.
207. Recommendations from this research included that:
- young and inexperienced riders should continue to be a target group for safety interventions and research is needed to develop and validate suitable interventions;
  - post-test training and rider development should focus on promoting a safe, responsible riding style building on the improved skills that come with experience;
  - rider training should focus more on developing insight into risk and self-limitations as well as control skills;
  - training and educational materials should be developed for riders returning after a long break;
  - ways of better communicating the risks faced by motorcyclists should be explored in order to help them to modify their behaviour or to encourage them to take further training; and
  - all-year round riding accident factors/liability should be researched.

## Measures in hand

### *In-Depth Study of Motorcycle Accidents*

208. The aims of this project are to:
- determine the sequential behavioural mechanisms and other relevant factors involved in PTW accidents and work-related accidents;
  - relate these mechanisms to the incidence of particular factors such as errors, violations or riding/driving styles by factors such as age, gender, experience, type of vehicle, manoeuvre, time and location type;
  - identify potential countermeasures and estimate their effectiveness; and

- present the findings in a way which is clear and relevant to the needs of planners, policy makers, road users, driving instructors and road safety educators.
209. The research is based on an in-depth analysis of police road accident reports sampled from several police forces. The sample includes all severity of accidents but is biased towards the more serious end of the spectrum.
210. The project was started in March 2001. An interim report has been received covering analysis of 1790 accident cases, including 1003 for which detailed information was available from the police files, for the years 1997-2002. Each case has been summarised on a database including the main objective features of the accident (such as time and location) and a summary narrative, a sketch plan and a list of explanatory factors.
211. 74% of the accidents were in urban areas, but rural accidents were over one and a half times more likely to be serious and over three times more likely to be fatal. Peak age groups for accident involvement were 16–20 and 31–35 years.
212. 38% of accidents involve *right of way violations*, but less than 20% of these involve a motorcyclist who was considered to be either fully or partly to blame for the accident. In most cases the other driver was primarily to blame. A key factor in such accidents was a failure in the observation of the road scene with the driver somehow failing to see a motorcyclist who should have been in full view. Many of these accidents occurred at T-junctions when a car pulled out into the path of a motorcyclist.
213. 15% of accidents involved *loss of control on bends*. These accidents were usually primarily the fault of the motorcyclist, and are more associated with riding for pleasure. Riders who have this type of accident are nearly three times more likely to be inexperienced, e.g. a rider who has only recently passed the motorcycle test. 20% of the accidents involving 16–20 year old riders involve going out of control on a bend. There was also a group of “returning” riders involved in this type of accident. Though excessive or inappropriate speed is implicated in a large number of cases, there are also some where inexperience alone seemed the primary failure, and there is also some evidence of riders hitting oil, gravel and mud on bends.
214. 11% of accidents in the sample were *rear end shunts*, which typically were judged to be the rider’s fault. At fault riders in these accidents tended to be younger and more inexperienced, and 40% were riding scooters or mopeds. Other accident types involved riders undertaking manoeuvres such as weaving or overtaking where drivers do not anticipate their possible actions.
215. Although this project is not yet complete, some initial conclusions can be drawn. Riders were found to be at least partially at fault in half the accidents suggesting that both riders and other road users need to be targeted by any countermeasures. There

are marked problems with other drivers either failing to see a motorcyclist, or failing to take into account the possible manoeuvres of riders and the possibility that they may do what to the driver seems unexpected. For accidents such as loss of control on bends, the riders' attitudes to risk or their lack of experience needs to be addressed.

216. The research is indicating two groups of at risk riders: the younger, inexperienced riders of smaller capacity machines, and older, more experienced riders of higher capacity machines.

## Future initiatives

217. Following recommendations from the scoping study on motorcycle training, the Department will undertake two new research projects. These are:
- *In-depth study on motorcycle training*: an in-depth investigation into the recruitment, content and delivery of a sample of pre and post-test training and assessment schemes in order to identify examples of good practice; and
  - *Review of motorcycle instructors training and qualifications*: an investigation of current qualifications and training opportunities available to motorcycling instructors, with a view to developing a coherent nationally available system of Continuing Professional Development for all motorcycling instructors. This project would also investigate the desirability and feasibility of a system of training and registration for instructors operating at post-test levels.
218. In addition, the DfT is part funding a second stage of the EU SUNFLOWER project. This is a comparative study of road safety in Sweden, the UK and the Netherlands. The research being funded will focus on motorcycle accidents and will review data on casualty trends and also policy for improving motorcycle safety in the three countries. The EU MAIDS Motorcycle Accident In-depth Study, is nearing publication.
219. The research undertaken so far addresses those issues which were considered to be the highest priority for informing the AGM.

**Recommendation: Advisory Group recommendations for the future programme include that:**

- **there is a need for a deeper understanding of the underlying accident causation factors, particularly for fatal accidents;**
- **research is needed into the relationship between accident risk and factors such as previous riding experience, type of test/training undertaken, whether there has been a break from riding, and also the road environment where accidents take place;**
- **research is needed into car driver skills, knowledge and attitudes in relation to motorcycle safety, including the incidence of drivers ‘looking but failing to see’ in accidents involving motorcycles;**
- **there is a need for research into the role of fatigue in motorcycle accidents;**
- **further research is needed into the relationship between rider control skills and hazard perception; and**
- **research carried out in other European countries and in the UK should be reviewed to establish where the gaps are in research needed.**

# SUMMARY AND RECOMMENDATIONS

## Summary

220. The Advisory Group on Motorcycling was established on 6 May 1999 to assist the Government in considering the role of motorcycling in an integrated transport policy and to explore some important and complex issues, including safety and environmental impact.

## *Safety*

221. This is a significant issue for Government, given the increasing numbers of casualties. The Government has already made a number of changes to the licensing and testing regime that will have a safety benefit for motorcyclists. Advice and guidance has been issued for motorcyclists including those returning to riding after a break and those who ride for a living. And DfT has launched publicity aimed at both urban and rural motorcycling.
222. Measures currently in hand include development of pre-test, vocational and post-test training, to be complemented by regulation of riding instructors. EC changes to the motorcycle testing regime will see new manoeuvres introduced into the UK test in 2008. Improvements to DAS training are also being considered.
223. A view of the Advisory Group was that it should not be overlooked that a high proportion of motorcycle accidents are caused by other road users. Hence, measures to improve other road users' responsibilities and awareness of PTWs should be considered.
224. The Highways Agency (HA) is responsible for operating, maintaining and improving the strategic road network in England. It has set out a five-year plan and programme of key actions to help reduce deaths and serious injuries on the National Road Network by one third. Motorcyclists have been identified within the Safety Action Plan as a key target user group that has specific requirements when using the Network. In order to deliver these, the HA will continue to explore how it can develop closer partnerships with stakeholders on road safety in order to jointly deliver safer roads.
225. HA safety initiatives include improvements to safety fencing using exposed support posts, issuing advice to designers to avoid locating manhole covers in the carriageway, and exploring the skid resistance of road markings and white lines.

### *Vehicle Safety and Security Task Force*

226. This Task Force was established to investigate how motorcycles might be made safer and more secure by better design, and to consider improvements that could help motorcyclists in their safe use.
227. The Task Force was unanimous that a regulatory provision was necessary to ensure the quality of replacement brake linings and that steps were needed to ensure that only properly approved and marked tyres are used. It agreed that manufacturers and retailers had a role to play in providing advice on the operation and use of advanced braking systems.
228. Leg protectors were regarded as a complex issue and to be considered in the wider context of EC collaborative research. But the potential of air bags to reduce injuries was accepted. Meanwhile the DfT is assessing the potential for a New Helmet Assessment Programme to help consumers differentiate between products.
229. Other issues considered included restricted vision provided by the rear view mirrors, the siting of indicator tell-tale lamps, the benefits of daytime running lamps, and whether a scheme like the EuroNCAP system of rating cars could be implemented for motorcycles.

### *Integration and Traffic Management Task Force*

230. A key issue for the Integration and Traffic Management Task Force was how to facilitate better provision for existing PTW users. A second strand of activity was to begin to quantify the effects of increased PTW use on congestion.
231. Legislation has been introduced to enable local authorities to install secure parking devices. And DfT advice to local authorities on providing for motorcycles has seen an increase in the attention given to PTWs in successive Local Transport Plans.
232. Views on allowing PTWs into bus lanes tend to be polarised. In order to get a better evidence base on which to take decisions, the DfT has commissioned research and worked with TfL on a parallel study, to assess the effects on different road users. The research tends to indicate no increase in accidents from allowing PTWs to use bus lanes, but conclusions have still to be drawn. Similarly, the DfT has commissioned research to look at the effects of allowing motorcyclists to use Advance Stop Lines.
233. The Task Force identified a gap in advice available to highway and traffic engineers about the particular requirements for providing safely for motorcycles on the road network. The Institution of Highway Incorporated Engineers (IHIE) has been commissioned to produce guidelines to fill the gap.

234. Initial studies of the congestion implications of increased motorcycle use show congestion benefits in certain situations. Further work is planned to test the conclusions in a more robust manner. This is vital if motorcycles are to be brought more into the mainstream alongside other modes of transport. Other issues remain to be considered more fully, including how best to deal with PTWs within traffic models, and testing the robustness of conclusions about the safety and environmental impacts when trips and vehicle types are disaggregated, as well as the conclusions so far on mode choice.

### *Environmental and Fiscal Task Force*

235. This Task Force examined the environmental impact of motorcycles and considered fiscal policy in relation to the use of PTWs.
236. Initial conclusions (2001) were that PTWs performed better than other vehicles in producing less carbon dioxide (CO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>) per passenger kilometre; but performed less well than other vehicles in relation to carbon-monoxide and hydrocarbons. Early results using a new “real world” *World Motorcycle Test Cycle* support this.
237. The results indicate that motorcycles are approximately one Euro (emission) standard behind passenger cars in their environmental development and there is room for further improvement. Emission standards for motorcycles that will enter into force in 2006–07 will see further improvements, with the expectation that the emissions performance of motorcycles will become better than cars.
238. In 2002 the Chancellor introduced a series of changes in Vehicle Excise Duty (VED) for motorcycles to relate VED more closely to engine size and to give the benefit of lower VED rates to smaller, more economical machines. The DVLA is reviewing options to improve the security of tax discs for PTWs.
239. The prospects of reducing the rate of VAT for safety items such as gloves, boots, motorcycle clothing and security equipment like alarms, immobilisers and secondary locks was considered. But EC policy suggests that the prospects for further items subject to a reduced rate are remote. However the Advisory Group believes that the Government should consider what fiscal mechanisms could be employed to encourage riders to take post-test training.

### *Statistics Task Force*

240. The Statistics Task Force was set up to explore the statistical information on PTWs collected and disseminated by DfT and to consider how the statistics could be improved.

241. Developments include DfT publishing statistics of PTW stock on a quarterly basis; doubling the sample size of the National Travel Survey which will provide better journey purpose information for motorcycling; improving VED evasion surveys; and revised traffic estimates.
242. Indeed, it is now estimated that motorcycling traffic increased by around 28 per cent between 1993 and 2001, rather than 18 per cent as previously estimated. DfT will continue to investigate ways of improving the sample of minor roads, where some existing PTW traffic may be missed.
243. The Task Force concluded that there would be value in bringing the key statistics together into a single Compendium of Motorcycling Statistics – to be published in 2004 – covering statistics on motorcyclists; motorcycles; journeys made; and motorcycle safety.
244. The computerisation of the MOT testing procedures in time will yield valuable new data on the mileage undertaken by different makes and model of motorcycles. The DfT is also working with the Association of British Insurers to investigate linking their data on insured vehicles with information from the DVLA record.

### *Research Task Force*

245. The Research Task Force of the Advisory Group on Motorcycling was established to identify research for improving motorcyclist safety, covering areas such as accident liability, behaviour and training.
246. Five projects were undertaken. An ‘Analysis of Police Fatal Motorcycle Accident Reports’ found that speed was a major contributory factor in fatal accidents, particularly in those accidents where the primary responsibility lay with the motorcyclist. Driver behaviour also contributed through carelessness and lack of awareness.
247. ‘A Scoping Study on Motorcycle Training’ found that the motorcycle training industry is very fragmented, with many small businesses providing a wide range of training. A wide range of qualifications is held by instructors, but most instructors are dedicated professionals.
248. Research into ‘The Older Motorcyclist’ recommended amongst other things, that training should be tailored to meet the needs of a motorcyclist’s experience, bike preference and riding habits – not their age. And that those riders who have returned to riding after a break should be encouraged to purchase motorcycles which are suitable to their experience, as opposed to their budget.
249. The ‘Multivariate Analysis of Motorcyclists’ Accident Risk Factors’ survey explored the relationship between accident risk and variables such as mileage, age

experience, engine size, journey type, training, behaviour and attitudes. Recommendations included that young and inexperienced riders should continue to be a target group for safety interventions; rider training should focus more on developing insight into risk and self-limitations as well as control skills; and ways of better communicating the risks faced by motorcyclists should be explored.

250. The final study, an 'In-Depth Study of Motorcycle Accidents', is in hand. The aims of this project are to determine behavioural mechanisms involved in PTW accidents. The research is indicating two groups of at risk riders: the younger, inexperienced riders of smaller capacity machines, and older, more experienced riders of higher capacity machines.
251. The Advisory Group believes that there remains a need for a deeper understanding of underlying accident causation factors, particularly for fatal accidents. Other factors warranting examination include fatigue, previous riding experience, type of test/training undertaken, whether there has been a break from riding, and also the road environment where accidents take place. Car driver skills, knowledge and attitudes in relation to motorcycle safety, including the incidence of drivers 'looking but failing to see' in accidents involving motorcycles should also be explored.

## **Recommendations**

252. The Advisory Group has made numerous suggestions and recommendations to Government throughout this Report. For ease of reference these are reproduced below.

### *Suggestions*

- (i) That all bodies with an interest in motorcycling should seek to remedy the bias of some institutions – including local authorities, employers, regional government, educational bodies, environmental and safety pressure groups – which the Group believes is contrary to improving PTW safety.
- (ii) That the DfT's THINK! motorcycle publicity should continue to be based upon improving observation and driving/riding standards, as should that for other modes.
- (iii) That Government should consider whether a minimum number of hours training should be introduced, following CBT, to ensure that the correct level of training is given.
- (iv) That the Government should consider whether it is appropriate for occupational riding to be undertaken by riders with a provisional licence.
- (v) That post-test training should recognise that the skills set required should differentiate from basic skills taught to novice riders. Riders should learn

skills such as braking, skid and speed control at the national limits, cornering, steering and countersteering to enable them to deal with hazards such as diesel oil, mud, bad road surfaces or other obstacles.

- (vi) That since the majority of novice riders choose to pass their test via the Direct Access route, as a relatively fast route to big-bike riding, it is timely for Government to consider:
  - whether or not the training and testing structure itself adequately equips riders for the conditions that they face on the road;
  - introducing elements of advanced riding technique and a requirement for candidates to complete a minimum number of hours on-road assessed riding (utilising a log-book scheme) prior to being awarded a test pass;
  - introducing a post-test training requirement; and
  - introducing ongoing Direct Access instructor monitoring.
- (vii) That, as a large proportion of motorcyclist casualties are caused by other road users, further work is required into how drivers can be made more aware of motorcyclists. Drivers need to be made aware of issues such as how their actions can affect motorcyclists, the limitations of PTW manoeuvrability in wet/slippy conditions, limited peripheral vision when a helmet is worn, judgement of speed, etc.
- (viii) That inclusion of bike awareness questions in the car theory test may help.
- (ix) That the role of Rider Improvement and Speed Awareness schemes be extended for offending motorcyclists. Consideration should be given to whether this should be optional or mandatory and the scope for a link to Bikesafe or post-test rider development schemes.
- (x) That interested parties should consider subsidies for advanced training for motorcyclists as part of a co-ordinated approach to promoting advanced training and rider assessments. Training promotion should be linked to new bike sales and the opportunities within retail sites to promote training need to be explored.
- (xi) That the press should be discouraged from glamorising inappropriate speed and behaviour, and from publishing advice on how to copy professional racers on public roads. Careful consideration needs to be given to the stereotypes and portrayal of motorcycling in both the specialist and non-specialist media.
- (xii) That the Government should consider the scope for a new “Roads Accident Investigation Board” with appropriate powers. A range of tools needs to be developed to look in-depth at each and every road accident that involves the attendance of the emergency services. These should not only consider the accident itself, but contributory and environmental factors and the level of rider/driver skills and training.

- (xiii) That the role of road user education be enhanced by bringing it to schools as a course in its own right. A GCSE on road safety is already offered in Northern Ireland and this should be extended to Great Britain.
- (xiv) That the police should improve driving/riding standards by better targeted enforcement and education of motorcyclists and other road users. This could be achieved by enhancing the role of the traffic police to enforce and educate road users on better standards of road use through more traffic patrols in which bad driving/riding is targeted.
- (xv) That manufacturers and dealers should take the lead by market engineering to encourage the use of a range of more practical all-rounder motorcycles like Fazers, Bandits, Sprints and VFR 800s. These machines still have an impressive performance capability but are better suited to everyday use.
- (xvi) That the Government should consider what fiscal mechanisms could be employed to encourage riders to take post-test training. For example, exemption from or a reduction in VED for riders who have undertaken further training.

### *Recommendations*

- (i) That the Government takes into account rate-based performance for motorcycle casualties in addition to the existing Road Safety Strategy casualty reduction targets.
- (ii) That DfT considers a hard hitting and sustained awareness campaign in which motorcyclists are targeted to better negotiate junctions, cornering, bends and overtaking. Since a high proportion of accidents involving motorcyclists are caused by other road users, a campaign of a similar nature to make them become more aware of motorcyclists should be continued in parallel.
- (iii) That as a high proportion of motorcycle accidents are caused by other road users, the Advisory Group calls for more emphasis on raising the awareness of all road users about motorcyclists through the Highway Code, publicity campaigns, the driving test and enforcement.
- (iv) That the Government considers funding mechanisms for a fully national Bikesafe programme that is operated to an agreed national standard. The scheme should appeal to those riders who are at the highest risk of having an accident. Bikesafe also needs to be clearer in terms of market positioning and activity so that overlap with the professional training industry doesn't occur.
- (v) That a scheme along the lines of Pass-Plus be introduced for motorcyclists. This could possibly be linked into ongoing work on post-test rider development to enable riders to become more "streetwise" shortly after the test.

- (vi) That there should be –
- development of a framework which will allow DSA to operate a voluntary list of post-test trainers;
  - development of national standards for trainers and the training they deliver;
  - standard syllabi for training with information available to riders listing the desired learning outcomes;
  - certification of training companies to ensure conformity to agreed standards; and
  - closure of the loop-hole that allows anyone to train riders who have passed CBT and are receiving instruction on 125cc machines prior to the statutory test.
- (vii) That the Government seeks to negotiate the third licensing Directive in order to retain subsidiarity, in so far as possible, over training and testing arrangements, and especially for Direct Access.
- (viii) That encouragement be given to the fitment of advanced braking systems and that manufacturers and retailers provide advice on the operation and use of the systems and implement appropriate dissemination routes.
- (ix) That DfT seek to find a compromise solution through the UN-ECE in Geneva that would require machines to be fitted with an AHO override switch.
- (x) That the DfT collaborates with the Task Force members to review the MAIDS report and identify what future actions could improve motorcycle secondary safety.
- (xi) That the Advisory Group supports collaborative initiatives already underway on safety helmet fitting guidance.
- (xii) That the Advisory Group broadly supports the DfT's initiatives on improved safety helmets and visors, and the feasibility study on a helmet consumer information programme.
- (xiii) That research should continue into Electronic Vehicle Identification but that civil liberty issues need to be properly considered and consulted upon.
- (xiv) That the DfT implements new regulations on replacement brake linings for motorcycles that establish minimum performance standards based upon UN-ECE regulation 90.01, and point-of-sale packaging, marking and labelling requirements.

- (xv) That the motorcycling user representatives and the DfT engage with the tyre industry, motorcycle retailers and manufacturers to consider appropriate information and dissemination routes, and the changing marketplace; consideration be given to including tyre safety issues in the compulsory training syllabus, testing and other rider development programmes; and that the DfT makes new provisions in the motorcycle MOT test to check on tyre approval marking as a failure item.
- (xvi) That user representatives assemble a comprehensive dataset of motorcycle types/models, and rider experiences where rearward vision is restricted; and that the DfT review approval requirements for mirrors in conjunction with the UK approval authority and manufacturers.
- (xvii) That the DfT, aware of the sensitivity of motorcyclists to daytime running lamps, review the Commission research to ensure any reported benefits are fully relevant to GB road and traffic mix conditions.
- (xviii) That the DfT considers researching the safety risk associated with the siting of indicator tell-tale lamps in conjunction with user representatives and manufacturers.
- (xix) That DfT should undertake a feasibility study to identify primary and secondary safety areas where realistic assessments could be made as part of a consumer information assessment programme.
- (xx) That DfT reviews Directives 93/33/EC and 93/34/EC relating to Anti Theft and Statutory Markings for motorcycles; and that DfT considers extending the Vehicle Identity Check to motorcycles.
- (xxi) That the Government should review the negative position in “Keeping Buses Moving” on allowing motorcycles to use bus lanes, to adopt a neutral stance on the issue. Results of research can inform further revisions of this advice.
- (xxii) That advice to local authorities on providing for PTWs on the road network should be published as soon as possible and kept up to date as knowledge develops through research and experience.
- (xxiii) That Government guidance and individual Travel Plans should be reviewed to ensure that it adequately recognises and incorporates the role that PTWs can play in Travel Plans.
- (xxiv) That the DfT should continue research into the use of ASLs, encouraging further sites in different situations for trials, and consider the policy of allowing PTWs to use ASLs in the light of that research.

- (xxv) That the results of the follow-up congestion research be widely disseminated. Where appropriate, policies at national or local level should be reviewed in the light of any robust conclusions that emerge. Consideration should be given to following up any further research that is identified.
- (xxvi) That DfT monitors progress of the Southampton University research into the factors that determine PTW use.
- (xxvii) That the second full Local Transport Plans should include appropriate provision for PTWs.
- (xxviii) That techniques should be developed to allow PTWs to be mainstreamed into the transport planning process.
- (xxix) That there is further investigation of PTWs' role in multi-modal journeys, including the collating of existing best practice.
- (xxx) That potential or perceived conflicts between PTWs and other road users should be properly explored and conclusions should be based on evidence.
- (xxxi) That concerted action to address the use of illegal exhaust systems and silencers is required. There should be a campaign to win the hearts and minds of riders to use compliant exhausts since the alternative may be more draconian action such as a requirement that illegal exhausts should be surrendered as part of the process of discharging a rectification notice.
- (xxxii) That the Advisory Group seeks the support of the UK Government and its EU partners for the motorcycle community in its efforts to achieve reduced rates of VAT for protective clothing, visors, security equipment and rider training.
- (xxxiii) That the DfT should publish a Compendium of Motorcycling Statistics in 2004 and maintain a web version that should be kept up to date as new information becomes available.
- (xxxiv) That the DfT's published statistics of the stock of PTWs should continue to show quarterly profiles within the year to take account of the seasonality of the licensed stock.
- (xxxv) That the DfT and the MCI should continue to develop motorcycle stock classification with the aim of adopting the body type classification in published statistics.
- (xxxvi) That the Quality Review of road traffic statistics should include consideration of the manual traffic count sample sizes and distribution across road classes needed to produce robust estimates for all vehicle types, including PTWs.

- (xxxvii) That the DfT should continue work on data relating to mileage, VED evasion, licensing and training and incorporate new information into the web version of the Compendium of Motorcycle Statistics, as it becomes available.
- (xxxviii) That for the future research programme:
- there is a need for a deeper understanding of the underlying accident causation factors, particularly for fatal accidents;
  - research is needed into the relationship between accident risk and factors such as previous riding experience, type of test/training undertaken, whether there has been a break from riding, and also the road environment where accidents take place;
  - research is needed into car driver skills, knowledge and attitudes in relation to motorcycle safety, including the incidence of drivers 'looking but failing to see' in accidents involving motorcycles;
  - there is a need for research into the role of fatigue in motorcycle accidents;
  - further research is needed into the relationship between rider control skills and hazard perception; and
  - research carried out in other European countries and in the UK should be reviewed to establish where the gaps are in research needed.

# ANNEX

## TERMS OF REFERENCE

The Terms of Reference for the Advisory Group are to explore:

- a) the safety record of motorcyclists and agree on measures to be taken to improve safety, including general road user behaviour and consideration of training and licensing arrangements;
- b) the environmental impact of motorcycles and to agree what measures, if any, should be taken in light of the conclusions reached by the Group; and
- c) the role of powered two wheelers of all sorts in an integrated transport policy including the scope for traffic management measures that are beneficial to motorcyclists and contribute to that policy.

## ADVISORY GROUP MEMBERS

Motor Cycle Industry Association (MCI)

British Motorcyclists Federation (BMF)

Motorcycle Action Group (MAG)

Despatch Association (DA)

Motorcycle Retailers Association (MRA)\*

Motorcycle Rider Training Association (MRTA)\*

Automobile Association (AA)

RAC Foundation (RAC)

Local Authority Road Safety Officers' Association (LARSOA)

Local Government Association (LGA)

Association of Chief Police Officers (ACPO)

\* Divisions of the Retail Motor Industry Federation





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