

## UNITED KINGDOM - STATUS REPORT

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### Introduction

I am pleased to be here today to present the United Kingdom's Status Report at this ESV.

My intent is to speak only about some areas of UK work, rather than go into details on the full range of activities where the UK makes an input to advance international progress on vehicle safety. In addition I would like to touch on some themes and issues which relate to our work. These aspects range from our new road safety targets to sections covering research, accident data, consumer information, public awareness, large vehicles, primary and secondary safety and intelligent speed adaptation.

### New UK Road Safety Targets

In 1987 Britain set a target to reduce road casualties by one-third by 2000 compared with the average for 1981-85. Greater reductions were achieved for deaths (39%) and serious injuries (47%) by 1999. But the number of slight injuries increased by almost 15% (mainly due to a 58% increase in traffic). Many factors were at work but improvements in vehicle design have helped to reduce deaths and the severity of injuries to car occupants.

In March 2000 the Government's road safety strategy was set out in "Tomorrow's Roads: Safer for Everyone". This set new targets for casualty reductions by 2010 compared with the average of casualties in 1994-98.

- 40% for all road deaths and serious injuries
- 50% for child road deaths and serious injuries
- 10% for the rate (by vehicle kilometres) of slight injuries

These are considered to be challenging but achievable targets. They, and the strategy, will be reviewed every three years to ensure that sufficient progress is being made. If progress exceeds initial expectations, the targets may be increased to ensure that they remain challenging.

There are ten themes in the strategy including safer vehicles; vehicle measures also contribute to other themes such as safer children and safer pedestrians.

### Research

First, a little scene setting to put our research on vehicle safety into context. The UK devotes significant resources to its national transport research portfolio every year and the vehicle safety programme is the largest of these. This programme currently covers about 50 separate projects into which we invest several million pounds each year. This research feeds directly into achieving our road safety targets.

We have long recognised the value of collaborative international research. We are committed to channelling our research contributions to the longer term work of EEVC and IHRA activities, as well as supporting the often more immediate issues that arise in setting motor vehicle standards in the European Union and Economic Commission for Europe (ECE). Although the main focus for research inputs is EEVC and IHRA, we have been successfully involved in other collaborative work ranging from multilateral research such as the European COST research umbrella to much more informal joint arrangements. I would like to stress that we also welcome co-operation with manufacturers; ranging from co-sponsorship of some of our accident investigation research to informal liaison linked to the development of improved standards.

This open approach can enhance our research outputs, helps stretch the research funds, and, very importantly, increases the chances of a successful outcome by facilitating the maximum degree of common understanding which underpins later agreement by all involved. We also pursue research unilaterally either sowing the seeds for long term joint progress, or shorter term to inform our position and contribute to discussions on improving safety. A key aspect is a willingness to make long term commitments; a few of these - in particular pedestrian protection - have been longer term than we first envisaged and required more perseverance than we anticipated.

### Accident Data Collection

This remains a fundamental element of UK activity in terms of informing other research projects and wider

policies. I would like to mention three specific projects although these do not cover the full range of vehicle related data sources.

Some of you may be familiar with the long standing UK Co-operative Crash Injury Study (CCIS) which investigates cars involved in accidents and related occupant casualties. This involves three data collection teams and is currently funded by DETR and four motor manufacturers; these are likely to be joined soon by others including a component manufacturer. Currently there are about 1500 vehicles per year examined, covering 1200 accidents.

In addition, separate research on truck accidents includes a Truck Crash Injury Study (TCIS) which is an accident investigation programme in which a similar examination is carried out on cases where a truck (over 3.5 tonnes) is involved. Currently about 200 accidents per year are examined.

A new DETR initiative in August 2000 addresses the need for a wider range of information on accidents. This major new "On The Spot" (OTS) project involves two data collection teams with expert accident investigators being deployed immediately to the scene of a road accident to gather data that would otherwise be quickly lost. The OTS programme focuses on:

- vehicles
- highway
- people involved (drivers, passengers and pedestrians including driver training, experience or other aspects that might have influenced the cause of the accident)
- injuries sustained

This project will help in the better understanding of many aspects and how they can influence accidents; these include driver experience, fatigue, road user behaviour, vehicle safety factors, road layout and conditions. About 500 accidents per year will be examined.

### **Consumer Information**

Giving consumers objective information on how cars perform in crash tests, and potentially in other areas, is an important mechanism which supplements the bedrock of legislative standards.

**Euro NCAP:** The UK research into the feasibility of an NCAP scheme, which could cover front, side and pedestrian tests, led to the formation of Euro NCAP. At present, it has the support of four European Member States, the Commission plus

motoring and consumer organisations. The UK has made a significant contribution to the development and work of this independent organisation and, to date, has sponsored about a quarter of the models tested. This partly reflects our involvement as a member from the very beginning and our relative share will naturally fall in future years but this simply reflects a healthy expansion of Euro NCAP. I am pleased to say that the UK will continue to make a significant contribution to Euro NCAP, and has allocated fresh funding for future years. This week you will see the results of the latest phase of this programme.

Euro NCAP has had a significant effect. There has been wide media coverage and, in turn, a greater awareness of car safety among the general public. I am pleased to say that manufacturers have responded extremely well in terms of occupant protection with 4 star ratings now relatively common. Sadly the normal score for pedestrian protection is 1 to 2 star and 3 star is rare. But some manufacturers have begun to take pedestrian protection more seriously and I am hopeful that the fruits of their work will begin to emerge – perhaps sooner than we might have originally imagined.

**Primary NCAP:** The UK continues to investigate the potential of having an NCAP type rating system for primary safety so that such features are evaluated in a meaningful manner to aid consumers. This work has included taking account of initiatives taken by Japan and promised by the USA and has gone on to take a wider view of the possibilities for brakes, lights, visibility, stability and ergonomics. We would seek to take a European approach for any proposals that might emerge from this work.

### **Public Awareness**

The UK public is not only interested in consumer information, they take a close and often acute interest in more general safety issues. This interest can focus on many aspects, occasionally at the same time, particularly:

- desire for a safety feature to be fitted
- concern over a specific aspect of safety or device, if present
- concern that a safety standard is inadequate or flawed
- freedom of choice e.g. no need for any control or controls are too stringent

There is often no 'perfect' answer but handling such issues well is important and requires technical knowledge combined with pragmatism. If for

example we require individuals to do something which they consider to be not really justified, or have concerns that it may not apparently benefit or even disbenefit them, they will naturally query the requirement. Such questioning sometimes arises from individuals who would be willing to follow a requirement they felt was justified. Such pressures are normally brought to bear at national level, but it is important that we do not lose sight of them when considering requirements at international level.

## **Large Vehicles**

Despite having legislation governing the construction standards of heavy vehicles, accidents involving lorries are still of concern.

**Braking:** An anti-lock braking system (ABS) has been a mandatory requirement on large vehicles (trucks, trailers and coaches) since the early 1990s. European Directive 98/12/EC extends the scope of vehicles to which Member States may require an ABS to be fitted. The DETR intends to apply this requirement in national legislation and it is expected that ABS could become a mandatory requirement on all trucks and trailers over 3500 kg and buses from March 2002. UK research into the relationship between brake system design and in-service braking performance has recently been completed. It has raised several relevant points that will be fed into international discussions on standards.

**Trucks (Other Aspects):** Accidents involving trucks remain a concern, whether the injuries are to the truck driver or others. The UK has long required effective side guards, rear under-run guards and spray suppression equipment on most heavy trucks. Research on truck accidents, including TCIS, has led to proposals on improved cab strength testing procedures to protect truck occupants; these address frontal impacts (mainly front into rear truck impacts) and overturning accidents. Seatbelts are very effective in preventing ejection, a major cause of fatalities, but it is evident that the compulsory wearing of seatbelts by truck drivers will only be fully effective if the cab structure maintains a survival space. Of course it is important to ensure that there is an improvement in crash compatibility between cars and trucks. We therefore welcome steps to improve front under-run protection. It is also important to further review rear under-run protection, in particular the height if the most effective interaction with cars is to be secured.

## **Car Secondary Safety**

Much of this work forms a UK contribution to the EEVC and towards the work of IHRA.

**Vehicle Compatibility (Car to Car):** The UK's significant research effort on compatibility has been ongoing for several years; this includes crash testing and modelling. This is an important issue and one where progress is very dependent on research. We welcome the medium and longer term commitment in this field. The emphasis has been mainly on frontal impact protection but side impact is also being considered. Compatibility issues can arise in all types of impact so the development of measures should yield valuable and wider benefits.

**Frontal and Side Impact Protection:** The UK has recently directed a significant proportion of its resources on research to underpin a review of the frontal and side impact Directives. This contributed to the EEVC report that was forwarded to the EU Commission in early 2000. This report recommended, among other things, that test speed for frontal impact should be raised and the scope extended to include light vans. Work has also been done to develop a designed based specification to the mobile deformable barrier (MDB) used in side impact tests.

**Child Restraints:** There has been a close UK involvement in the development of the ISOFIX child restraint system both within ISO and in promoting European discussions. We would wish this system to offer a step forward in reducing misuse and in safety terms. Remember, we have set a high target for child casualty reduction.

**Pedestrian Protection:** The UK has been actively involved in pedestrian protection research for a quarter of a century, and has been contributing to the work of the EEVC on this issue since 1988. It has taken a leading role in the challenge of successfully developing a robust sub-systems test procedure which can assess the likely damage caused to human legs and heads resulting from an impact with a car. The EEVC Working Group 17 final report was issued in March 1999. We believe this work offers a sound scientific basis for the assessment of the level of pedestrian protection offered by new vehicles in Europe.

Bull bars have attracted a lot of public concern; the aggressive nature of many bull bars is easily visualised whereas aggressive structures under the surface of cars are much less obvious. The UK has

carried out work comparing the aggressivity of a range of typical bull bars and base vehicles. The findings and proposals for effective approval procedures, suitable for both a quick amendment to an existing Directive and longer term pedestrian protection proposals, have been fed into European discussions.

### **Helmets for Motorcyclists**

The UK has been closely involved in collaborative work to prepare a recent important amendment to the ECE helmet standard introducing new chin-guard and rotational acceleration tests. It has also contributed to the collaborative European COST Research project on future helmet standards.

### **Intelligent Speed Adaptation**

Inappropriate speed is a factor in a significant number of accidents. Research estimates that, in the UK, Intelligent Speed Adaptation (ISA), in its optimum form would reduce all injury accidents by over one third (36%) and reduce all fatal accidents by over one half (59%). It would also reduce fuel consumption by up to 8%.

We do not believe that technology is the limiting factor in the implementation of ISA, rather it is how drivers' will adapt their behaviour in day-to-day driving of a vehicle equipped with ISA. It is for this reason the UK has commissioned further research to examine whether drivers adapt their behaviour in a safer or more risky way over a period of time when driving an ISA equipped vehicle.

### **And Finally**

We should not forget that road casualties existed before the advent of the motor car. In the late 1890's there were 1663 fatalities of which 11 were linked to velocipedes or early bicycles and only 7 to motor vehicles (steam powered). Although the new road safety target of 40% is framed in terms of an overall reduction in deaths and serious injuries combined, a 40% reduction in deaths would be well on the way to the level of 1890. Indeed a 53% reduction would deliver that level – in effect the mobility level of the 21<sup>st</sup> century for the casualty level of the 19<sup>th</sup> century.

This would be a significant achievement. But it is clear that the technology levels needed for the achievements to date and those in prospect are vastly different to those available in the 19<sup>th</sup> century. The efforts to deliver a broad sweep of casualty

reductions will hopefully ultimately carry us further towards the Swedish vision of zero casualties.

It is specialists like those here today from industry and research groups who will continue to deliver the research insights and technological advances that provide the continued improvements that we need. The role of ESV has been a key element in achieving what has been a cultural change on safety in the vehicle community and in promoting ongoing improvements. I am confident that this conference will continue the tradition of presenting informative papers which describe or stimulate effective advances in vehicle safety.