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agenda item 14(a))

*Department for
Transport*

Informal Document No. WP.29-145-15
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agenda item 6.

MOTORCYCLE HELMETS: CONSUMER SAFETY INFORMATION

SHARP

World Forum for Harmonization of Vehicle Regulations
145th session

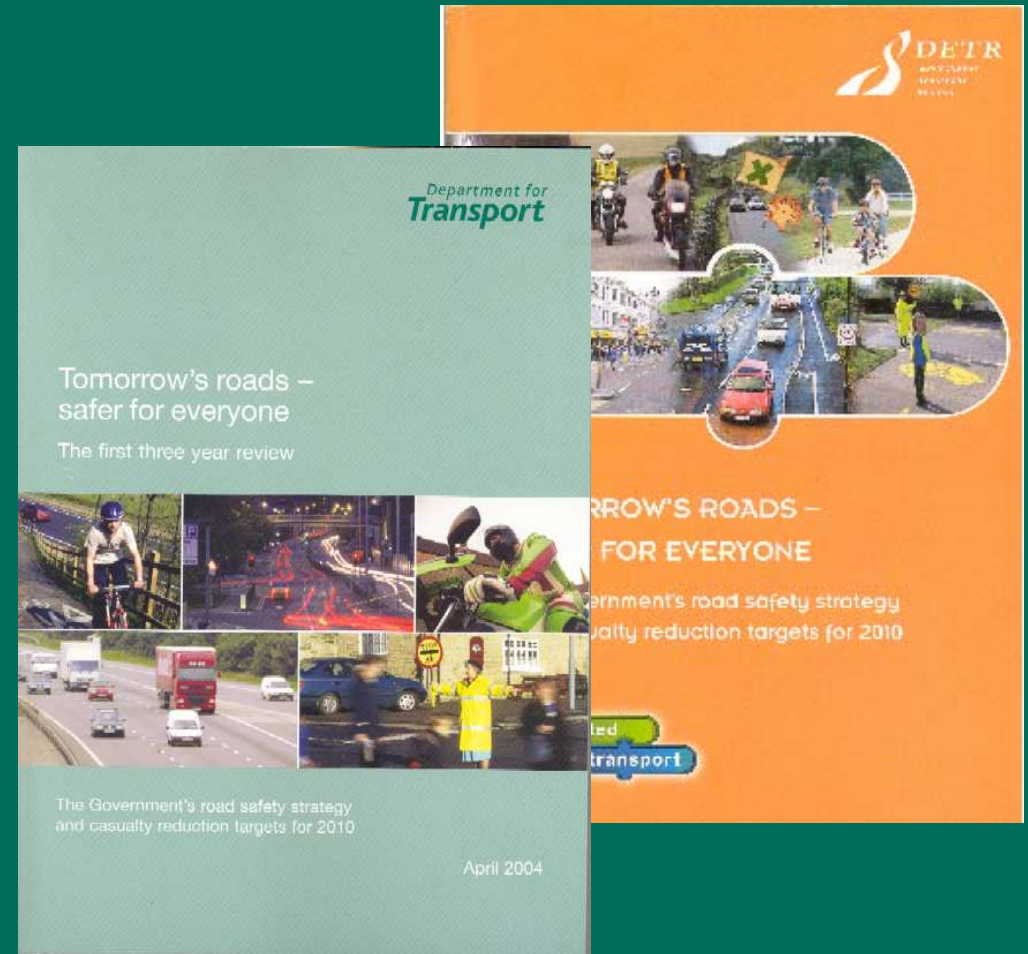
June 2008

UK Department for Transport

Road Safety Policy

Department for
Transport

- *Tomorrow's roads – safer for everyone*
- Strategy launched in March 2000
- First review published April 2004
- Second review published mid 2007



The Casualty Reduction targets

By 2010:

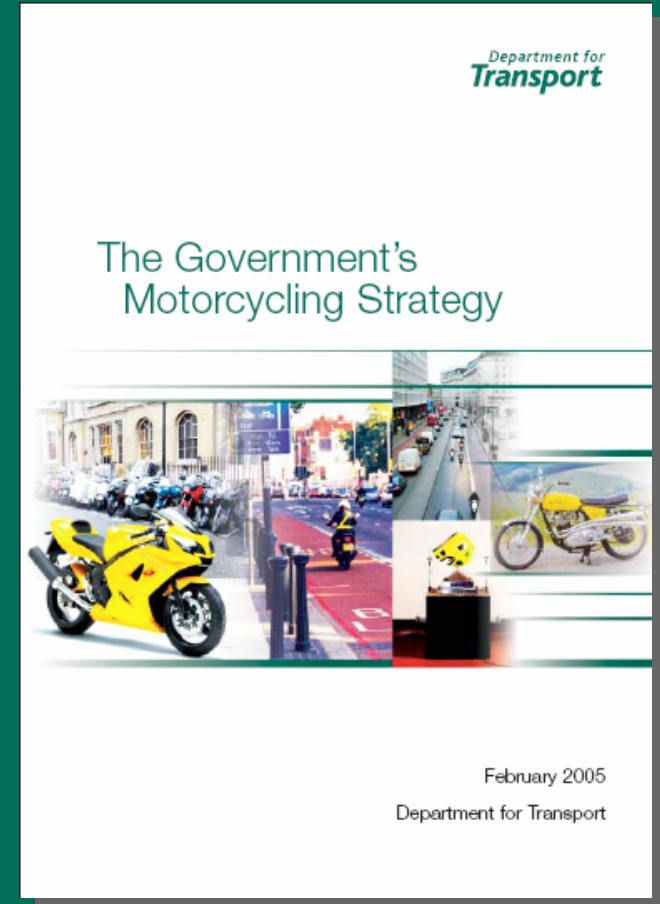
- 40% reduction in all KSIs
- 50% reduction in child KSIs
- 10% reduction in the rate of slight injuries

...and tackling the significantly higher incidence in disadvantaged communities

compared to the average for 1994-1998

Motorcycling Safety

- Is a key issue for UK – separate strategy published in Feb 2005
- Motorcyclists are one of our most vulnerable groups of road user – comprising just 1% of traffic in the UK but represent 19% of all road deaths.
- 80% of all motorcyclist fatalities and 70% of those with serious injuries, sustain head injuries.



Research

- COST 327 European research brought together experts from France, Germany, Hungary, Italy, Netherlands, Switzerland, Finland and United Kingdom and completed in 2001.
- Key outcomes included:
 - Location and frequency of blows to the head,
 - Determining the speed range of survivable head impacts
 - Recommendations for future test methods and criteria.



Research

- UK commissioned further studies to understand the protection provided by current helmets conforming to ECE Reg. 22.05.
- Results showed noticeable differences in the safety performance of approved helmets available in the market.
- Developed tests to establish which helmets provided greater safety potential than others, and objective assessment to provide purchasing information to motorcyclists.



SHARP – The Helmet Safety Scheme

Department for
Transport

- **SHARP** – the **S**afety **H**elmet **A**ssessment and **R**ating **P**rogramme – was launched in November 2007.
- Helmets are rated from 1- 5 stars depending on how well they perform in the laboratory tests.
- The tests are based on the science - reflecting current state-of-the-art in design, as well as user exposure and injury risk (COST 327).



SHARP Tests

Linear Impact:

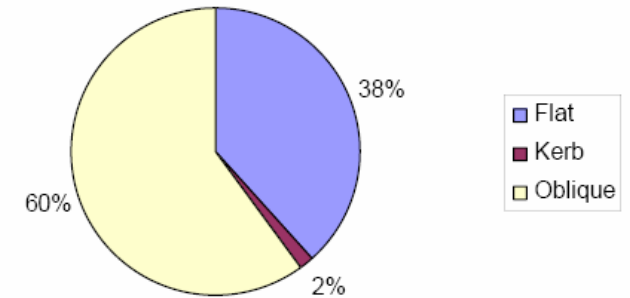
- twin-wire guided test based on British Standard BS 6658:1985 Helmet standard. The rig minimises the effect of energy dissipation through helmet rotation and rebound.
- Head forms of variable mass, as prescribed in UN-ECE Reg 22.05.
- Impact sites based around Reg 22.05 points, tested using flat and kerb anvils.
- Including one higher and one lower impact speed compared to Reg 22.05

Oblique impact: Reg 22.05, METHOD A.

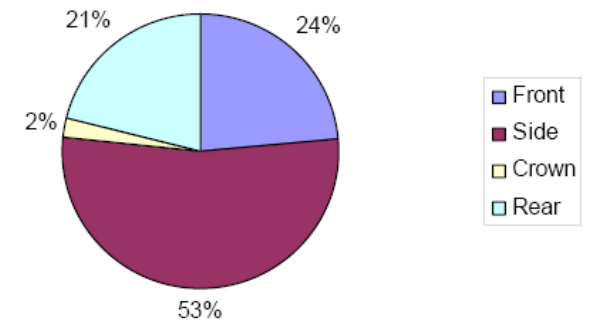


SHARP Assessment

- Reg 22.05 underpins the SHARP assessment, therefore SHARP tests at ambient conditions. SHARP does **not** perform tests on retention systems or chin bars.
- Peak g recorded over 32 individual impacts performed on 7 helmets at 3 velocities.
- Overall helmet rating is weighted to take account of the frequency and direction of real world impacts.

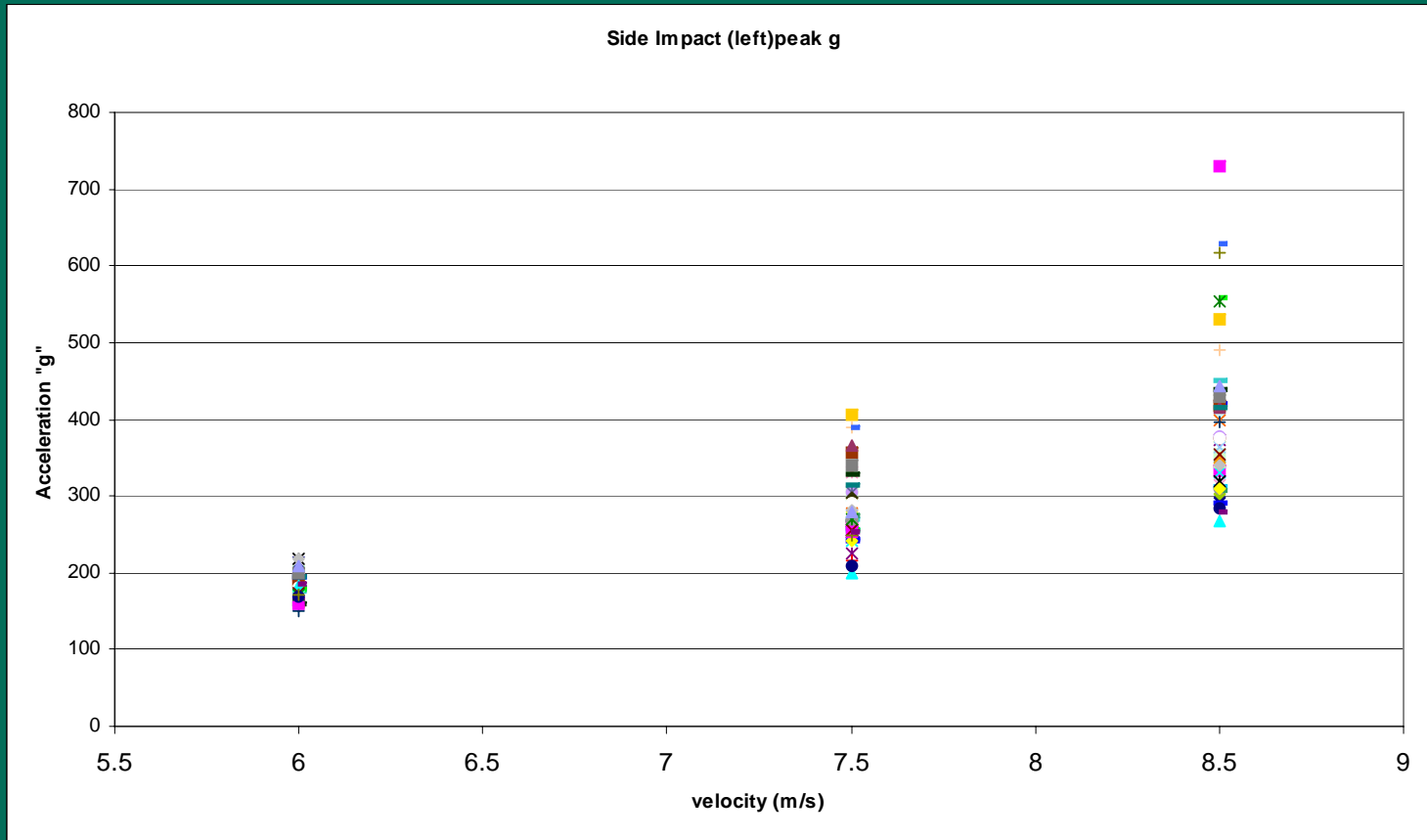


Impacts by surface type, COST 327




Impacts by helmet location, COST 327

Performance Differences



Dissemination

- Priority message is for motorcyclists to get a helmet that provides the best fit.
- Then consider the SHARP rating; the more SHARP stars a helmet has, the more protection it can provide.
- Several strands targeting manufacturers, retailers and consumers.




SHARP
www.direct.gov.uk/sharp
THE HELMET SAFETY SCHEME

★★★★★

GETTING THE RIGHT FIT

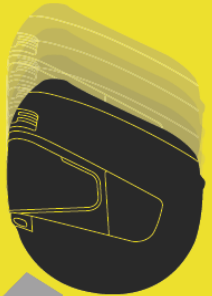
HELPING YOU PROVIDE THE SAFEST CHOICE OF HELMET FOR YOUR CUSTOMERS

Including the first safety ratings for full face motorcycle helmets – spring 2008



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THE HELMET SAFETY SCHEME

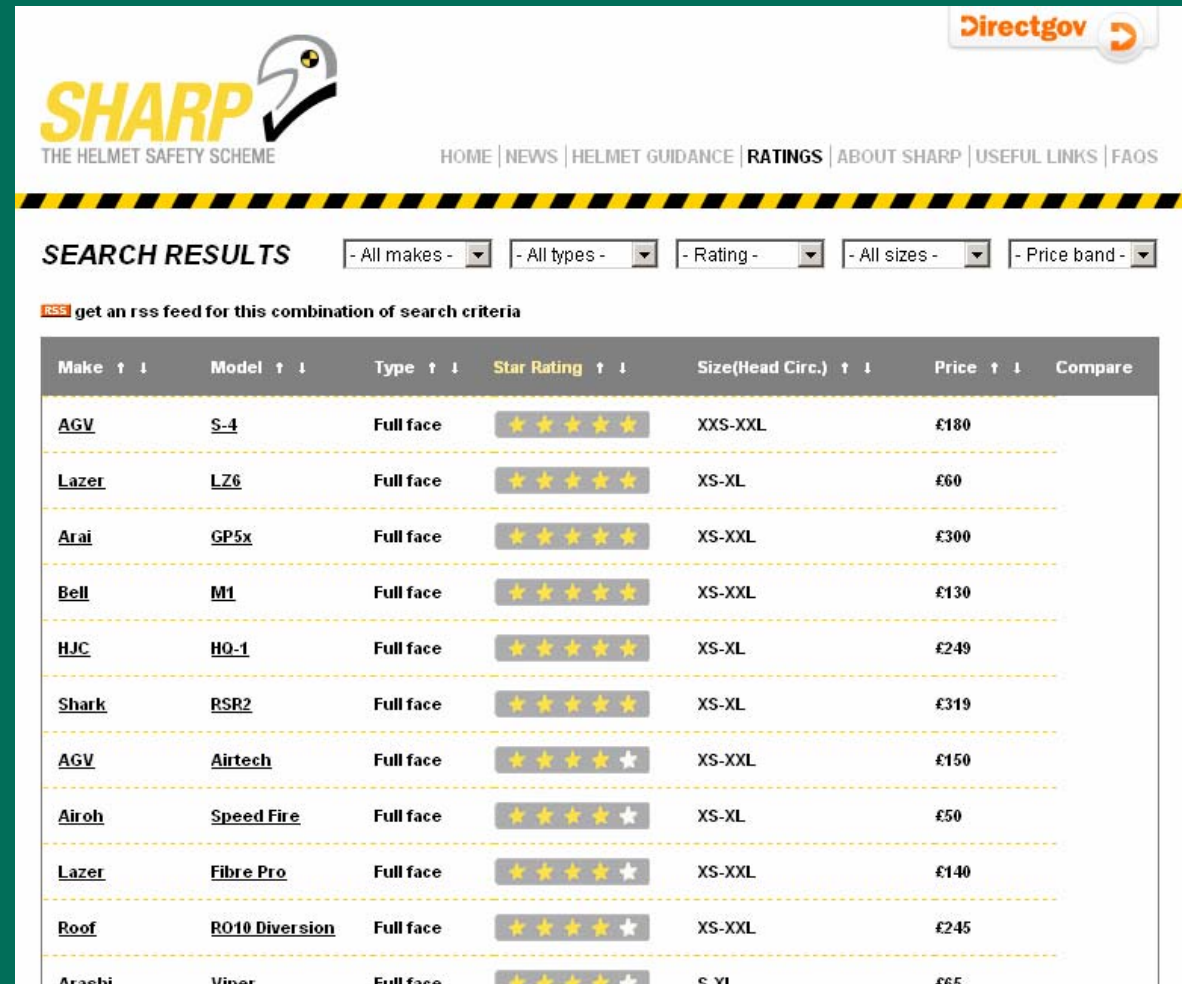
★★★★★



SAVING LIVES FROM SPRING 2008...

SHARP ratings

- Results published for 60 full face helmets on June 12.
- Testing continuing through 2008 to complete full face helmets (representing ~ 80% of UK sales),
- Moving on to system / flip front helmets and then open face.
- Tests valid for all types/ styles of helmet



SHARP THE HELMET SAFETY SCHEME

HOME | NEWS | HELMET GUIDANCE | **RATINGS** | ABOUT SHARP | USEFUL LINKS | FAQs

Directgov

SEARCH RESULTS - All makes - - All types - - Rating - - All sizes - - Price band -

get an rss feed for this combination of search criteria

Make ↑ ↓	Model ↑ ↓	Type ↑ ↓	Star Rating ↑ ↓	Size(Head Circ.) ↑ ↓	Price ↑ ↓	Compare
AGV	S-4	Full face	★★★★★	XXS-XXL	£180	
Lazer	LZ6	Full face	★★★★★	XS-XL	£60	
Arai	GP5x	Full face	★★★★★	XS-XXL	£300	
Bell	M1	Full face	★★★★★	XS-XXL	£130	
HJC	HQ-1	Full face	★★★★★	XS-XL	£249	
Shark	RSP2	Full face	★★★★★	XS-XL	£319	
AGV	Airtech	Full face	★★★★☆	XS-XXL	£150	
Airoh	Speed Fire	Full face	★★★★☆	XS-XL	£50	
Lazer	Fibre Pro	Full face	★★★★☆	XS-XXL	£140	
Roof	R010 Diversion	Full face	★★★★☆	XS-XXL	£245	
Arashi	Viper	Full face	★★★★☆	S-XL	£65	

Further information

Department for
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- Available from the SHARP website www.direct.gov.uk/sharp
- or direct from sharp@dft.gsi.gov.uk

