





BP5: PTW Design and Protective Equipment

Reference: BP5 014	Title of Project:	UK SHARP Helmet Rating System
Version: 1	Website:	http://sharp.direct.gov.uk/
Brief Description of Project:	<p>Areas for improvement identified in the testing procedures for current helmet standards (ECE 22.05) lead to the introduction of the SHARP (Safety Helmet Assessment and Rating Programme).</p> <div style="display: flex; align-items: center;">  <p>On its launch in November 2007 the official press statement stated:</p> </div> <p><i>“All helmets on sale in the UK must offer the wearer a minimum level of protection, but tests show there are real differences in safety performance. SHARP’s objective advice, based on rigorous testing, will help riders choose a safer helmet by measuring the extent to which a helmet exceeds the minimum standards. Jim Fitzpatrick said: “Our research indicates that even though all helmets have to reach a minimum legal standard, safety performance can vary by as much as 30%”.</i></p> <div style="display: flex; align-items: center;">  <p>The UK Minister, Jim Fitzpatrick went on to say, <i>“We estimate that if all riders wore helmets that scored well in our rating system, the SHARP scheme could save up to 50 lives a year.”</i></p> <p>The SHARP tests place greater emphasis on side impacts in addition to the tests simulating frontal impact. This reflects the observed frequency of impact configurations from collisions data.</p> </div>	

	<p>Additional higher and lower speed tests are also undertaken.</p> <p>The result is a 5 star rating system, with the best performing helmets awarded 5 stars and the worst 1 star.</p> <p>The rating system has become controversial as some cheaper helmets have been awarded 5 stars whilst some expensive helmets from well known manufacturers has performed less well in the tests.</p> <p>In the UK, having campaigned for such an enhanced testing procedure, Motorcycle News criticised the SHARP scheme, calling into question the data behind the additional tests. They asserted that the data indicating a greater emphasis on side impacts was incorrectly interpreted and that the SHARP tests did not adequately model frontal impacts as a result. The newspaper subsequently published a retraction, correcting their assertion that SHARP tests did not include adequate testing of frontal impact but the resistance to the scheme from some major manufacturers remains.</p>
Monitoring Data:	The scheme is based on performance test data linked to observed common collision impacts. The tests are intended to measure the energy transferred to the rider's brain in common collision impacts and therefore assess the helmet's protective qualities.
Results:	The SHARP scheme claims that if all PTW riders used a 5 star helmet, 50 lives would be saved in the UK each year. Across Europe this could represent a saving of several hundred lives.
Key Effective Conclusions:	<p>The testing organisation is supported by the UK government as part of their 'Think' campaign to reduce road casualties. It is independent from any manufacturer or lobby group.</p> <p>Although there has been some resistance to the additional tests and rating protocol, at present the balance between conflicting opinion appears to be in favour of the SHARP system.</p>
Projects for Comparison:	<p>Motorcycle protective clothing (BP5 012).</p> <p>Motorcycle Helmet Standards (BP5 013).</p>
Justification:	Notwithstanding the concerns expressed by some manufacturers, the SHARP rating system appears to offer the potential to contribute to eSUM WP3, BP5 objectives by reducing PTW fatalities due to head injuries.