



# Safety Working Group

## Neck Restraint for IPV Operators

The HTMA Safety Working Group has developed a neck restraint for operators of Impact Protection Vehicles (IPV) in an attempt to reduce the number of RIDDORs\* caused by whiplash injuries.

The IPVs are designed to take the impacts of other vehicles whilst deployed on the Highway. The vehicle is fitted with a crash cushion, reversing alarms, CCTV, work lights, warning alarms and high specification lighting as standard, while the drivers are provided with a seat and belting arrangement that protects the driver, however there is still significant risk of whiplash injuries where the neck is either stretched or compressed should an impact occur.

Using ideas from other industries (such as Formula 1, karting, skiing and mountain biking), the solution came in two parts - a neck brace that is used predominantly in motor sport and karting, and a helmet that is more akin to those used for skiing and mountain biking, which allows for better hearing and visibility.

The principle behind the combination of the brace and helmet is that, as the head is thrust forward or back on impact, the base area of the helmet hits the collar of the brace. This limits the degree to which the neck can be stretched and injury caused. The combination provides the necessary protection, visibility and hearing for the operators.

Initial trials of the neck restraint have gone well and it is currently fully adopted on the M40 Maintenance Contract. Testing will continue through to Autumn 2011 by different HTMA members, to measure comfort factors during the different seasons, visibility and mobility needed by the IPV drivers.

\*The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR), places a legal duty on employers, self-employed people and people in control of premises to report work-related deaths, major injuries or over three-day injuries, work related diseases and dangerous occurrences or near miss accidents.