

Agenda Item No. 4(e)

DERBYSHIRE COUNTY COUNCIL

**MEETING OF CABINET MEMBER - HIGHWAYS, TRANSPORT AND
INFRASTRUCTURE**

29 September 2015

Report of the Strategic Director – Economy, Transport and Environment

SIMULATOR CAR

(1) **Purpose of Report** To seek the Cabinet Member's approval to make a grant of £25,000 to Derbyshire Fire and Rescue Service (DFRS) for the development of a simulator car, the VRS (Vehicle Restraint Simulator), which will be used at events, schools and colleges to show how young drivers can drive safely and avoid involvement in a crash. It will also give people a virtual experience of being involved in a crash to drive home the road safety messages.

(2) **Information and Analysis** Tackling driver casualties, in particular those involving young drivers, is a clear priority for the Derby and Derbyshire Road Safety Partnership (DDRSP), as outlined in the DDRSP Strategy 2015-2017 and approved by Cabinet at its meeting of 24 March 2015 (Minute No.125/15 refers). The Strategy commits the Partnership to hold "Dying to Drive" events, young driver workshops in schools and colleges, and to develop various communication activities targeting young drivers. The Derbyshire Fire and Rescue Service lead on this activity.

There was an increase in young car drivers killed or seriously injured (KSI) on Derbyshire's roads in 2014. Up to the end of December 2014 (the latest full years data), 37 young car drivers were KSI, compared with 26 in the whole of 2013 (a 42% increase). The simulator car will be set up with scenarios that address the nature of collisions involving young drivers. Young car driver collisions are disproportionately higher on high speed roads, wet road surfaces, in the hours of darkness, in evenings and late at night, in winter months, and on Fridays and Saturdays.

This activity will improve the individuals' (drivers and passengers) attitudes towards road safety and reduce the severity of injuries by making them think about their vulnerability on the roads.

Authorisation has already been given by the DDRSP Managing Group, chaired by the Strategic Director – Economy, Transport and Environment, to pay for £25,000 for the development of this simulator by DFRS.

The DFRS has a unique working relationship with Toyota cars which will provide the car for free. DFRS has previously created similar simulators which are used for its vehicle extrication training. DDRSP wishes to build on this expertise by developing this work further so that the simulator can be used to promote road safety messages.

DFRS has two vehicles at present which are used as a training aid for its fire crews: the 'Transformer' and the 'Safety Engineered Simulator' (SES). The Transformer vehicle is an adapted car that can be repeatedly 'cut up' for extrication training. The bespoke SES vehicle further develops the Transformer vehicle to showcase airbag deployment with the ability to recharge and deploy repeatedly without any on-going costs to the Fire Service.

DFRS would like to build a vehicle which takes the concept of both the SES and the Transformer, but also highlights the dangers and consequences of the FATAL 4: not wearing seat-belts, using a mobile phone whilst driving, drinking and driving, and speeding. The vehicle will be able to seat up to five occupants each time, with the driver taking part in a hazard perception test and pressing the brake pedal when a hazard is seen.

The vehicle occupants will be watching a pre-recorded drive on a 4D screen (windscreen and front side windows) which will also be shown on a large screen to the outside audience. The driver could be asked to carry out a task such as send a text message, and when a number of hazards have been missed, a switch will be activated which will put the occupants in the scene of a real life road traffic collision (RTC). The hydraulic suspension will simulate the impact, the vehicle's airbags will activate simultaneously with the seat belt pre-tensioners, and the vehicle will have artificial smoke blown into the seating area. The image of an RTC will be shown on the 4D screen, with the audio effect of real life sounds played through speakers built into the head rests. After a few minutes, the roof would be folded forward which would demonstrate a 'roof flap' by fire crews. It is envisaged that the whole experience will take no longer than 10 minutes (5 minutes for the running time and 5 minutes to have the system ready to go again for 5 more people to go in the car).

The vehicle would be available for all partners to utilise for their road safety initiatives and campaigns. The vehicle will be taken to schools, colleges, and universities, and will support the 'Young Driver Education' programme.

Operational fire crews within the City and County will support the road safety calendar by taking the vehicle to shopping centres, supermarkets, etc, and will constantly use it as a prevention tool.

The video that will be shown during the experience will be changed to suit the audience. The videos will simulate the experience for either:

- Car
- HGV
- Motorcycle

The SES Vehicle can be used repeatedly with minimal on-going costs. The unique, patented recharging system uses standard DFRS breathing apparatus cylinders to demonstrate airbag deployment with the ability to recharge and deploy repeatedly with costs absorbed by DFRS. This will be replicated on the VRS.

It is intended that the car would be used at:

- Young drivers education in schools (approximately 50 schools per year).
- Events and shows, mainly through the summer period (Chatsworth, Bakewell, etc).
- Station open days (approximately 8 per year)
- Any identified local RTC campaigns.
- "Dying to Drive" events (6 per year).
- National Road Safety campaigns.

The DFRS will provide a full quarterly report to the DDRSP Managing Group.

(3) **Financial Considerations** The £25,000 costs relate to the adaptation of the car only. Toyota is providing the car for free.

If this vehicle was being built by for an external provider, it would cost in the region of £65,000.

This grant will be funded from the Partnership's Reserves.

There would be no additional costs to the Partnership for maintenance and the costs of transportation of the vehicle between locations, and staff time to operate the vehicle, will be absorbed by the DFRS.

The car will be DFRS' asset. As a condition of the award of the grant, when the car is eventually sold, any net sale proceeds have to be utilised for road safety activities.

Other Considerations

In preparing this report the relevance of the following factors has been considered: legal, prevention of crime and disorder, equality and diversity, human resources, environmental, health, property and transport consideration.

(4) **Key Decision** No.

(5) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

(6) **Background Papers** Held on file within the Economy, Transport and Environment Department. Officer contact details - Claire Molyneux, extension 38573.

(7) **OFFICER'S RECOMMENDATIONS** That the Cabinet Member approves:

7.1 The award of a grant of £25,000 to Derbyshire Fire and Rescue Service for the development of a car simulator.

7.2 The addition of the Vehicle Restraint Simulator to the Capital Programme 2015-16.

Mike Ashworth
Strategic Director – Economy, Transport and Environment