

## Got a big (or small) idea that could improve safety?

We want to hear from you! Improving safety through innovation requires ambition and focus – and we recently launched the [safety innovation priorities](#) document which sets out the five areas where innovation can deliver real improvement in health, safety and wellbeing for our people. The Innovation Priorities explain the areas we are focussed on, while the [Innovation Portal](#) provides a route for anyone inside or outside of Highways England to get in touch with us about innovations that can improve safety, customer service or delivery of the Road Investment Strategy. We want anyone who has had an idea or an innovation that can help improve safety in the five priority areas to get in touch via the Innovation Portal. We can then work together to improve safety for our people and so make sure everyone gets home safe and well every day.



## Highways England Blue Star Awards

Blue stars are awarded for exceptional performance or new Initiatives not widely used on other sites and are awarded by members of the Highways England H&S team during site inspection.

They are published on the H&S Toolkit;  
<http://www.highwaysafetyhub.com/hs-toolkit.html>

## Highways England Safety Alerts HEi053 – Underground Services

This and previous alerts are available through the following link:  
<http://www.highwaysafetyhub.com/alerts.html>

## Safer Vehicle Restraint System (VRS) Removal

Dangers associated with VRS removal in particular (but also including lighting columns, signage, bollards etc.) are widely known and highlighted by a number of serious (fatal) incidents and near misses which have occurred. It is clear that using a mixture of methods and machinery, including lorry-mounted cranes and chains and clamps which are not specifically designed for this purpose is neither safe nor acceptable.

In line with the Highways England H and S innovation ambition to 'automate high risk activities that expose our people to potential harm' a different approach to a highly dangerous process needs to be implemented.

Typically almost all current methods use a 'plate clamp' which is designed for lifting sheet steel plate, to connect onto the post. These are not designed for pulling, where the load applied is unknown, not always vertical, and which can suddenly be released. They rely on the weight of the load to maintain grip. If the post suddenly breaks free of the ground or snaps, then this force is lost and the post can be ejected. If used in conjunction with a lorry mounted crane, where there can be a significant build-up of elastic energy, the post can be ejected into the air as elastic energy is released.

Also if enough force is applied, the top part of the post can simply be torn out, again causing a sudden potentially dangerous, release of energy as equipment breaks free.

There can be no defensible reason to allow the use of such equipment, which could expose operators to potential harm, when there is a proven safe alternative, which eradicates all of these dangers, removes the need for 'boots on tarmac' during the extraction process, eliminates all manual handling of posts, and is very cost effective. (Up to 10 times faster in trials)

Barrier Master has been used on a regular basis by companies such as A One+, Colas, CHC highways etc. for the last two years. It has won several awards, not least the Highways England Supplier Recognition Scheme, Safety Health and Well Being Award and has also been published in the [Highways England H & S toolkit no. 378.](#) Here is a quote from an A One+ keynote speech given at a CIHT lecture recently which demonstrates; 'How Barrier Master impacted on three key initial objectives identified by Aone+'

### 1. Safer operations

- Contributes to A-one+ achieving 4m hours RIDDOR free
- 60% reduction in post removal lifting equipment defects costs, from July - Dec 2015
- Near misses associated with traditional post removal methods eliminated
- Manual handling element removed

### 2. Improved Customer Service

- Average barrier repair time reduced from 5 to 4 days.
- Safer road user journey and improved experience with less outstanding network repairs
- Reduced accident damage repair costs passed onto drivers and insurers
- Unplanned road closure duration reduced by estimated 450 hours per year
- Lower scheme delivery costs
- Reduced noise pollution

## Blue Star 76 – Virtual Reality Plant Person Interface Training

### 3. Industry wide benefits

- Success shared with highway maintenance contractors throughout the UK
- Barrier Master models are now available across the industry
- A-one+ adopted Barrier Master as primary method across all contracts
- Other applications removal of bollards, lighting columns, sign posts, timber fence posts

#### Testimonial

“The Barrier Master is an industry game changer which overcomes all safety concerns associated with the traditional and well established industry methods. Colas have found the Barrier Master to be faster, more efficient and a more economical method of post extraction which will undoubtedly benefit the wider industry”

**Alan Gray,**  
**Safety Fence Manager, Colas**



Working collaboratively, the M6 Digital Engineering team and a team member from Vinci in Watford have developed a Virtual Reality (VR) People Plant Interface training experience.

The training places a person virtually into a construction scenario where an excavator is digging into the embankment and filling up the nearby wagon. The goal of the training is to highlight the danger zones red and amber around the plant, assert that they must never pass behind the excavator and to reinforce the correct method of gaining permission from the plant driver to pass by.

The user starts by placing the headset on and we give them the left and right controller. The scenario places them on one side of the excavator and we ask them to position themselves using the left green teleport trigger in a safe position out of the red and amber zones and in line of sight for the plant driver. If the user is on the right side of the driver we use this as an opportunity to relay that the driver only has a small sight line of you standing there as the arm and hydraulics of the excavator are in the way.

We ask the user to press a button on the controller to check the drivers view if the operative can be seen. If so, we ask the user to wave at the driver to get his attention, the driver should then put his bucket down stop the machine and gives a thumbs up to let the user walk in front of the machine.

The user must ensure they stay in clear sight of the driver at all times whilst crossing and keep the zones highlighted, remaining out of them. Once they have passed safely to the other side and are asked to look at the highly dangerous space behind the excavator, how little the driver can see and never to go there. It is also reiterated that there have been nine crush fatalities on live sites in the past seven years.

For the full blue star report see here;  
[http://www.highwaysafetyhub.com/uploads/5/1/2/9/51294565/bs76\\_virtual\\_reality\\_plant\\_person\\_interface\\_training.pdf](http://www.highwaysafetyhub.com/uploads/5/1/2/9/51294565/bs76_virtual_reality_plant_person_interface_training.pdf)



## Highways England scoops three awards in safety 'drive' to customers

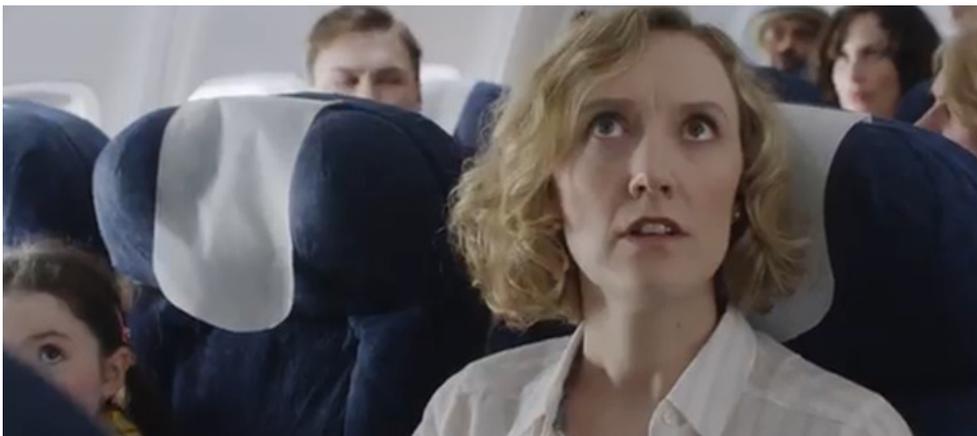
Highways England has been praised for three leading safety initiatives designed to encourage motorists to check their vehicles before setting off, they won three awards at the TyreSafe Awards 2018. It scooped the prestigious 'Safety in the Community' category and Online and Social campaign for its 'Vehicle Checks' campaign.

The national Highways England 'Vehicle Checks' campaign ran across television, radio and online platforms last summer and called on motorists to consider basic checks such as topping up oil, checking tyre pressures and ensuring there

was plenty of fuel in the tank. The campaign underlined the importance of checking the vehicle before setting off and drew comparisons with the high-level of safety placed on those travelling by plane.

By taking a humorous approach to the advert – which featured a pilot announcing he'd done no pre-flight safety checks whatsoever to the aeroplane - the 'passengers' quickly set about disembarking underlining the seriousness of safety checks before travel.

See the video here; <https://www.youtube.com/watch?v=IWS1e3QFeAk>



## Road Worker Abuse

A road workers' workplace is amongst one of the most dangerous and vulnerable places to be. Not only do oncoming vehicles pose a threat to road workers, but the behaviour of drivers in passing vehicles is a growing problem. Abuse to road workers should not be overlooked, and HTMA continues to work hard to raise awareness of the work road maintenance workers carry out, in order to change the public's perception and behaviour towards them.

A survey released by the RAC Foundation (2007) found:

- 80% of road workers have been physically or verbally abused by motorists
- 40% of workers are abused on either a daily or weekly basis

Road workers often experience: the throwing of missiles (often food and bottles), verbal abuse, personal injury caused by road users' vehicles. But one of the most worrying and dangerous factors is the speed at which the drivers pass through road works, resulting in collisions and many near misses.

They will often ignore the temporary speed limits, leaving the workers even more vulnerable with very little to protect them from approaching vehicles. Campaigns such as the Highway Agency's award-winning 'Respect our Road Workers' campaign in 2009 highlight the risks road workers face and remind drivers to take care when driving through roadworks.

The HTMA Health Safety & Welfare working group have developed a toolbox talk and poster to help improve reporting of incidents with an aim to reduce the number of incidents and to change the culture and eliminate

