Vanishing act for ghost markings thanks to Highways England road trials

When white road markings are removed, for example when road layouts change, the original lines can sometimes still appear as faint or ‘ghost’ markings, particularly in bright sunshine.

This can make the road ahead unclear for drivers. But, as this new footage shows, huge progress is being made in a trial on the M5 in the South West to eradicate the problem.

Making ‘’ghost markings’ vanish

Last year Highways England launched a £685,000 international research project to find a solution to issues around the removal of white lines and of ‘ghost markings’.

The competition set out to identify the most effective road markings that will also reduce damage to the surface when the lines are removed.

Seven new products are being tested to check their skid resistance and performance in the dry and wet as well as five systems for removing white lines to see if they are more effective.

Head of Lean and continuous improvement Martin Bolt, who has been overseeing the competition for Highways England, said:

> The trial will continue until April but the results so far have been very promising and the safety benefits are already clear. We are very optimistic that we have identified some effective solutions to a worldwide problem.
>
> We know that people find the ghost lines confusing but these new methods could make this issue disappear, creating safer journeys for drivers. They will also prevent damage to the road surface saving time and money.
>
> We have certainly gaining a greater insight into the materials and processes we, and the road industry, could be using in future schemes.

One approach used in the trial has been to apply a black baseline first before adding the white line. This also fills in some of the voids in the road preventing the marking penetrating too deeply into the surface.

Another advantage is that it provides greater contrast between the marking and the road itself which will be increasingly important as autonomous vehicles are introduced.

Products from around the world were submitted for the competition. At a testing centre in the Spanish capital Madrid, the markings were then subjected to some two million ‘wheel overs’ to find the top products for skid resistance and performance.

The best seven were then also put to the test on the northbound carriageway of the M5, between junctions 20 (Clevedon, Nailsea) and 18 (Avonmouth).

Once testing is complete, the most successful products will be highlighted in research shared around the world and setting new high standards for the road industry.

The competition, launched in conjunction with Roadcare and Kier, was funded through Highways England’s Designated Fund for Innovation.

Keith Dawson, managing director of Roadcare, said:

> It is refreshing to see such collaboration across a wide range of countries, All competitors should be congratulated for the attitude they have shown throughout this competition in sharing knowledge and best practice, from which we have gained an enormous amount of data based on facts not opinions.

Tom Tideswell, head of innovations at Kier Highways, said:

> Ghost markings are confusing to road users which can lead to poor lane discipline through no fault of their own and, in worst case scenarios, cause incidents to occur.
>
> During the trials, the five innovative road markings removal systems demonstrated their capabilities and have since provided very positive results which could lead to eradicating this issue and create safer journeys for road users.
>
> They will also reduce the scarring/pothole creation by being less intrusive to the carriageway which in turn improves journey reliability by reducing the amount of closures required to carry out repairs in addition to saving money.

General enquiries

Members of the public should contact the Highways England customer contact centre on 0300 123 5000.

Media enquiries

Journalists should contact the Highways England press office on 0844 693 1448 and use the menu to speak to the most appropriate press officer.

European ‘comet chaser’ probe to be designed in UK

Thales Alenia Space, who have three sites in the UK and employ nearly 200 highly skilled engineers and scientists, have won one of two parallel mission study contracts for the design concept of the mothership and a smaller robotic probe for the European Space Agency (ESA) Comet Interceptor mission. Design work is also taking place in Italy.

The mission will see one main spacecraft and two smaller robotic probes – the other built by the Japanese Space Agency – travel to an as-yet unidentified comet, and map it in three dimensions.

The UK is also leading on the science. The mission was first proposed by an international team led by University College London and Edinburgh, and the mission’s lead scientist is based at the Mullard Space Science Laboratory in Surrey. Several UK academic teams are also proposing contributions to onboard scientific instruments that will study the target comet in unprecedented detail.

Comets are what is left over when a planetary system forms and in each ancient object is preserved information about the formation of the Solar System 4.6 billion years ago.

Once in space, Comet Interceptor will wait in a parking orbit – possibly for years – until a suitable target has been spotted by astronomers. It will then set out on an intercept course, deploying the two smaller probes, which will make extremely close passes of the comet’s nucleus and beam their data back to the main craft.

This new ambush tactic is the first of its kind. The fly-by of the two probes, which are roughly 30cm in length, is likely to take just a few hours but could illuminate conditions that prevailed more than 4 billion years ago.

Science Minister Amanda Solloway said:

> The UK’s space industry is thriving and this out-of-this-world mission is testament to our world-leading expertise.
>
> I am very proud that scientists and engineers in Bristol and Harwell will be designing the Comet Interceptor spacecraft – their incredible work will not only further our understanding of the evolution of comets but help unlock the mysteries of the Universe.

Previous missions have studied comets trapped in short-period orbits around the Sun, meaning they have been significantly altered by our star’s light and

heat. Breaking from that mould, Comet Interceptor will target a pristine comet on its first approach to the Sun.

The scientists are likely to target a comet travelling from the Oort Cloud – a band of icy debris that lies about halfway between the Sun and the next nearest star.

This debris was formed during the conception of the Solar System, but was rapidly ejected to its outermost edge. Unlike more familiar comets, their surface will not have been vaporised by the Sun's energy – a process that leads to dust building up on a comet, obscuring its original state.

Once the probes reach a pristine comet, they will study and scrutinise the chemical composition of it, with one aim being to evaluate whether similar objects may have brought water to planet Earth in the past.

Andrew Stanniland, CEO of Thales Alenia Space in the UK commented:

> I am delighted ESA has once again placed its trust in our scientists and engineers at Thales Alenia Space in the UK who have excellent heritage from previous scientific missions such as Giotto and Rosetta.
>
> We all look forward to supporting this exciting and unprecedented scientific mission to uncover more information about the origins of our Universe.

Comet Interceptor is the first of the European Space Agency's new class of "fast" missions. Each mission must weigh less than 1,000kg and be ready for launch around 8 years after selection, so they can hitchhike into space on an already scheduled launch.

Comet Interceptor will launch in 2029 alongside the Ariel space telescope – another UK-backed ESA mission to study the atmospheres of exoplanets orbiting other distant stars.

In 1986, a UK-led mission to Halley's Comet became the first to observe a cometary nucleus.

HMG suspends import tariffs on Covid-19 products to fight virus

- Tariffs suspended on a wide range of goods in the fight against Covid-19
- These build on tariff reliefs in place through 2020, are available to all importers and are automatically applied.

- Suspensions planned to last for a year, subject to regular reviews

Tariffs on medical products used to help fight against coronavirus have been suspended by the Government in the fight against the pandemic, lowering costs on these critical items for organisations across the UK.

The new measures, which ensure no tariffs will be due on imports of goods including face masks, gloves and other protective equipment, will come into effect from 1 January 2021.

In May, the Government announced the UK Global Tariff (UKGT), which will apply to products from countries not covered by alternative trade agreements following the end of the EU transition period. Many medical and pharmaceutical goods, including vaccines, will be made tariff-free under the UKGT, but the Government is now going one step further and ensuring there are no additional costs on any items on the World Health Organisation's latest list of critical goods. This includes items like protective goggles, face masks, hand sanitiser, medical scrubs and face shields.

Since the start of the pandemic, the UK has removed tariffs on critical medical products for the NHS and other public bodies through tariff reliefs. These new suspensions extend to private sector organisations, including care homes, which were previously paying tariffs between 2% and 12% on these goods.

The procurement process will also be more streamlined for the NHS and other front-line public services, which will now automatically get these goods tariff-free rather than having to apply for reliefs. It will keep costs down for care providers across the public and private sector as we continue the fight against the virus.

Secretary of State for International Trade, Liz Truss, said:

> Throughout this global pandemic, we have been working tirelessly to protect the public and those bravely working on the front line. The global need for these vital goods in 2021 will be just as great as it has been this year and we continue to work with partners around the world to keep supply chains flowing.
>
> As we emerge as an independent trading nation, we will shape our trade policy to the needs of the UK economy and society and will be a powerful voice for open markets and free trade.

Financial Secretary to the Treasury Jesse Norman said:

> Since the beginning of the crisis the Government has worked to provide those working on the front line the protective equipment they need. Scrapping tariffs and streamlining the procurement of

> these essential items, such as face masks and gloves, will keep costs down for care providers as we continue the fight against the virus.

This follows the Prime Minister's announcement at the UN General Assembly in September that the UK would suspend tariffs on COVID-critical items, as part of the UK's five-point global plan to deal with the current crisis and prevent future pandemics.

Today's announcement comes as the UK welcomes the Ottawa Group's Trade and Health Initiative which encourages international partners to continue the flow of essential goods in tackling the COVID-19 pandemic. The UK will implement some of the measures suggested and the tariff suspensions will come into force for 12 months to the 31 December 2021 and will be subject to ongoing reviews.

Sellafield computer donation helps West Cumbrian school children

Almost 500 recycled laptops and computers have been donated by the company to schools across West Cumbria with further donations planned soon.

Although no longer needed by us, our Information Services Organisation team and supply chain partners ATOS and Allvotec, were able to identify which machines were still in good working order.

Ian Skipper, ISO head of integration support services and transition, at Sellafield Ltd explained:

> An internal hardware and software update meant that we have equipment that was surplus to our requirements but of a high enough specification for use in schools.
>
> After a quick clean down, memory replacement and new blank hard drives inserted they were packed up ready for new academic homes rather than being packed up for landfill.
>
> This really was a Sellafield Ltd, Atos, and Allvotec joint initiative and I cannot give enough credit to the team who turned the donation idea into a reality.

The next challenge was making sure that the equipment made it into the hands of schools and children who really needed it.

Gary McKeating, head of community and development, at Sellafield Ltd said:

> One of the key aspects of SiX – our social impact, multiplied programme is that we target the support we are able to provide to areas of real and demonstrated need.
>
> We know that some students have struggled to access laptops to help with their learning during the first lockdown and if they need to isolate for any period of time.
>
> Another feature of our social impact work is collaboration. We aren't best placed to say which schools need the support the most, which is why we've worked with the WELL Project to identify where the equipment should go.

The laptops have become available as a result of the company's migration to the Windows 10 platform. This has included a roll-out of new machines to all our employees. The process is ongoing and is expected to be complete next year.

The donated equipment is now in use in schools across West Cumbria, including Dean School.

Chair of the local governing body at Dean School, Claire Kirkpatrick, said:

> This equipment has made a massive difference to the way that lessons can be delivered.
>
> Previously we only had a very small number of laptops, all of which were extremely old, that had to be shared between a large number of children across the school.
>
> This was never ideal but especially in the current climate. However, thanks to Sellafield Ltd's kind donation, every pupil in a whole class can now have access to a laptop.

More than 137,000 people in UK receive first dose of COVID vaccine in one week

More than 137,000 people in the UK have received the first dose of the Pfizer/BioNTech COVID-19 vaccine in the first week of the largest vaccination

programme in British history.

The government has today released provisional figures which show at least 137,897 people received their first dose of the vaccine by the end of Tuesday 15 December. 108,000 people were vaccinated in England.

The figures are provisional and subject to change. Formal statistics will be published every week from next week.

The majority of the vaccines have been administered to the over-80s, care home workers and NHS staff through more than 70 sites across the UK.

GP-led centres started vaccinating patients this week in England and the roll out will expand to care homes soon.

Over the coming weeks and months, the rate of vaccinations will increase as more doses become available and the programme continues to expand.

Health and Social Care Secretary Matt Hancock said:

> Thanks to the hard work of the NHS across the UK, over 137,000 people have already received the first dose of the coronavirus vaccine.
>
> This is just the start and we will steadily expand our vaccination programme – ultimately helping everyone get back to normal life.

The Pfizer/BioNTech vaccine is the first vaccine to be authorised for use by the medicines regulator, the Medicines and Healthcare products Regulatory Agency (MHRA). Patients require 2 doses of the vaccine – 21 days apart – for the vaccine to be fully effective.

Thanks to the work of the government's Vaccines Taskforce, 40 million doses of the Pfizer/BioNTech vaccine have been secured for the whole of the UK.

Rolling reviews on the Oxford/AstraZeneca and Moderna vaccines are underway and, if authorised by the MHRA, will mean there are more doses available to vaccinate those most in need.

All vaccinations in England are recorded between 8 December and 15 December and represent the first doses only.

The data for England is drawn from 2 sources depending on the vaccination site:

- for hospital sites the data is reported from the National Immunisation Management Service, which is the system of record for the NHS vaccination programme
- for local vaccination services this is an initial data extract from the Pinnacle system, which is being used by GPs to record COVID-19 vaccination events. This data will also be aggregated into the National

Immunisation Management Service

A formal COVID-19 vaccine uptake publication will be published from next week.