

Revolutionary resurfacing on the A1 in Northumberland

National Highways will be trialling the use of graphene – a material only one atom thick – in its road surfacing to see if it prolongs its lifespan.

If successful, using this high-tech product could see the operational life of key road features extended by a number of years, reducing the frequency of roadworks and making journeys for road users smoother and more reliable.

The revolutionary resurfacing will take place along three miles of the northbound carriageway between Newton on the Moor and West Cawledge, south of Alnwick, from Sunday 19 September to Monday 1 November.

National Highways Asset Needs Manager Graeme Watt said:

This is an exciting time for National Highways. We are constantly striving to improve the journeys of our customers and graphene has real potential to do that.

Laboratory trials have been a success and the on-site trials in Northumberland will be a world first use of graphene in road production, which enforces our commitment to innovation and helps to push the industry towards more carbon-friendly maintenance with longer-lasting solutions which we all benefit from.

Graphene's benefits are industry-changing. It's stronger than steel and adding it to other materials can turn them into super materials. From what we've seen so far, it could make some of our assets last significantly longer.

Graphene is the name for a single sheet of carbon atoms, arranged in a honeycomb pattern. It is the building block of graphite – pencil lead – and is an incredibly strong, conductive and flexible material. It can be used in a wide range of applications, from aerospace engineering to digital electronics and biomedicine.

National Highways is carrying out the trials with the Graphene Engineering Innovation Centre (GEIC) at The University of Manchester and Pavement Testing Services (PTS).

To carry out the resurfacing safely and efficiently, the northbound carriageway will be closed 24/7, with traffic running in a contraflow, one lane in each direction, on the southbound carriageway. A number of crossovers will be closed and clearly signed diversions will be in place.

National Highways will also be resurfacing both carriageways of the A1 between Purdy Lodge and Detchant, although this work is not part of the

graphene trial.

The work begins a week earlier on Monday 13 September and is due to be complete on 3 November. It will then be followed by sign replacement until the end of the month. Work will take place overnight Monday to Friday 8pm to 6am.

During the essential maintenance, which will give road users a safer, smoother journey, there will be various traffic management measures in place including full closures of the A1, junction closures and traffic being controlled by temporary lights and then taken through the work area by convoy.

Clearly signed diversions will be in place.

Details of both schemes are available at the [Yorkshire and North East maintenance schemes](#) web page.

General enquiries

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

Media enquiries

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

[Extending the deadline of the Queen's Awards for Enterprise](#)

The last 18 months has been an unbelievably testing period for businesses up and down the country, but it has been truly inspiring to see the creativity, dynamism and resilience of entrepreneurs shining through despite the challenge of the pandemic.

We believe that there is no better time than now to celebrate the incredible achievements of UK business owners.

This is why we have extended the deadline for applications to the Queen's Awards for Enterprise 2022 until midday on Wednesday 22 September. We want as many businesses as possible to have the chance to apply and be recognised for their achievements.

With Her Majesty's Platinum Jubilee taking place next year, this is the ideal time to throw your hat in the ring for a prestigious Queen's Award.

The Awards are UK-wide and reflect the remarkable diversity of firms in every corner of the country. Last year's winners included a company in Aberdeen that has been making quality mattresses for 170 years, a low carbon manufacturer in South Wales making sustainable construction materials, a bakery in London working with survivors of domestic abuse and a social enterprise in Barnsley helping to tackle poverty and food waste.

We're backing businesses through the pandemic and beyond as well as levelling up every region and nation of the UK, promoting opportunity for all. Celebrating business through the Queen's Awards is a central part of achieving this.

The Queen's Awards are the most prestigious awards for UK businesses and a Royal endorsement that helps businesses get noticed, both at home and overseas. Other benefits include:

- excellent marketing opportunities and press coverage
- worldwide recognition as an outstanding British company
- increased turnover in the UK and overseas

Awards are given for excellence in innovation, international trade, sustainable development and promoting opportunity through social mobility. Whether you excel in one or more of these categories, these Awards are a unique way to recognise what you and your staff have accomplished.

The winners pass a robust assessment process, judged by senior civil servants and experts from industry, academia and the third sector. Her Majesty's Lord Lieutenants will be presenting the Awards to successful businesses locally throughout the year.

Winners get to fly the Queen's Awards flag and use the logo in all their marketing materials – a huge boost for brand visibility, credibility with partners and suppliers, and staff morale. Receiving a Queen's Award for Enterprise is an enormous honour and something which business people up and down the land should value and aspire towards.

I encourage businesses to apply for this year's Queen's Awards and to submit their application.

Best of luck!

[Apply to be the British High Commissioner to India for a day](#)

The pan-India competition is being organised to celebrate the International Day of the Girl Child.

To apply to be 'High Commissioner for a Day', applicants must record and upload a one-minute video on 'how can young people best support tackling the global challenge of climate change?' The video must be shared on either Twitter, Facebook or Instagram by tagging @UKinIndia and using the hashtags #DayoftheGirl. The deadline to apply is 22 September 2021.

Alex Ellis, High Commissioner to India, said:

The impact of Covid-19 on education around the world will be long term, particularly for girls. This is why at the UK-hosted G7 Summit earlier this year, leaders from around the world agreed ambitious global targets to get more girls into school. Empowering and educating girls is also one of Prime Minister Modi's central campaigns. I am delighted to note that this year nearly 60% of UK's Chevening fellowships and 52% of the scholarships for India were awarded to women.

The International Day of the Girl Child is an important moment to recognise that educating all girls everywhere is not just the right thing to do, it is one of the smartest investments we can make to build a better, more equitable world. Through the 'High Commissioner for a Day' competition, I want to shine a light on brilliant young women and for them to show their even younger peers in school, that anything is possible.

The British High Commission has run the 'High Commissioner for a Day' competition annually since 2017. Last year's competition was won by 18-year-old Chaitanya Venkateswaran, whose day as the High Commissioner included learning about gender representation in the media, interacting with senior police officers from Madhya Pradesh and Telangana, and launching the British Council STEM Tracer Study documenting the stories of Indian women scholars.

Further information

The UK and India are learning from each other and sharing expertise to ensure women and girls can reach their full potential around the world. In India, the UK is working hand-in-hand with state governments, law enforcement agencies, education authorities and British businesses to promote gender equality.

The 'High Commissioner for a Day' competition is open to Indian women aged 18 to 23. The deadline to apply is 22 September 2021.

A jury at the British High Commission (BHC) will select the winner, who will be announced on @UKinIndia social media channels by 28 September. Only one entry per participant will be accepted. Multiple entries from the same person will be disqualified. The High Commission's decision is final and no correspondence relating to the above will be possible.

By applying to the competition, participants transfer the copyright ownership of their videos to the BHC New Delhi. BHC may use these videos to produce

content for future communication on its social media channels.

Participants are reminded not to share personal details in their video, post or tweet. The BHC is not responsible for the data that participants make public on these platforms.

The High Commissioner for a Day programme will take place in-person in Delhi (unless Covid-19 advice changes). We cannot fund travel or accommodation to Delhi as part of the competition. In case the winner is not from Delhi/NCR, it is the winner's sole responsibility to ensure all Covid-19 protocols required for travelling to Delhi are properly followed.

Our ambition is to host in-person meetings; however, this is dependent on the Covid-19 situation. In case Covid cases increase or the Ministry of Health and Family Welfare advises against in-person meetings in October, the programme may be run virtually.

For media queries, please contact:

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[ESFA extends School Resource Management Adviser programme](#)

News story

Programme to provide free resource management advice to schools extended to August 2024.



Baroness Berridge encourages anyone who has yet to work with a School Resource Management Adviser (SRMA) to come forward to take advantage of this free expert support.

We are continuing to provide independent School Resource Management Advisers (SRMAs) to work with trusts and local authorities free of charge over the next three years after the continued success of the programme since the 2017/18 pilot.

We have contracted, following a fair and open procurement competition, the Institute of School Business Leadership and North Yorkshire County Council, who will recruit and manage a cohort of at least 200 accredited SRMAs until August 2024. We have also contracted Education Performance Improvement Ltd to provide a continued accreditation process for new SRMAs.

Since the 2017/18 academic year, SRMAs have worked with over 1,000 settings to provide expert support to help them make best use of their available resources to provide the best possible education for their pupils. Any savings are kept by schools to reinvest into priority areas.

Baroness Berridge, Parliamentary Under Secretary of State for the School System, said:

I am delighted to announce that we will continue to provide access to SRMAs free of charge to schools for the next three years.

It is clear from the feedback we have received from schools and trusts to date that SRMAs have become system leaders and vital partners, in the same way as National Leaders of Education and National Leaders of Governance. I encourage anyone who has yet to work with a SRMA to come forward to take advantage of this free expert support.

John Edwards, interim ESFA Chief Executive, said:

Over the last four years SRMAs have carried out invaluable work to help schools and trusts make even better spending decisions for the benefit of their pupils.

SRMAs have provided expert challenge and support to those in a range of financial positions. Our decision to fund this programme for a further three years underlines our commitment to partnership working with the whole sector to help them make the very best use of their resources.

ESFA will be publishing further information about the impact of the programme since the pilot in due course. If you are interested in working with a SRMA, please [contact ESFA](#).

You can read more about information, tools, training and guidance schools and academy trusts with [financial planning and resource management](#).

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[Next generation of UK science leaders backed with £113 million to bring innovations to market](#)

- Nearly 100 of the UK's future science leaders will benefit from a £113 million cash boost to help commercialise their innovations
- projects supported include robotics supporting British farmers, new therapies to tackle chronic illnesses and unlocking the secrets of naturally occurring batteries
- follows publication of the recent Innovation Strategy to turn world-leading science into new products and services

Four-legged robots to assist British farmers and new types of therapy to treat chronic conditions such as Crohn's disease are among nearly 100 cutting edge projects that will benefit from a £113 million government cash injection.

97 of the UK's most promising science and research leaders will be backed with £113 million, Science Minister Amanda Solloway has announced today (Wednesday 8 September), to help bring their innovative ideas from lab to market and provide bold solutions to tackle major global issues ranging from climate change to chronic disease.

Among the UK's future scientific leaders being backed today is Dr Dimitrios Kanoulas at University College London who will lead the RoboHike project to give autonomous 4-legged robots the ability to navigate through difficult terrain, including in construction and agriculture, as well as at the scene of natural disasters. This will enable fast, robust, and reliable navigation

in situations where timely delivery of services and emergency aid is essential.

Another project, led by Dr Yujiang Wang at Newcastle University will use long-term brain recordings, combined with wearable environmental sensors, to capture and analyse fluctuations in epileptic seizures. Its aim is to gain a better understanding of how seizure activity and severity varies case by case and will enable Wang's team to forecast the severity of upcoming seizures for individual patients, as well as developing future treatments that may reduce their severity.

Delivered through UK Research and Innovation's (UKRI) flagship [Future Leaders Fellowships scheme](#) – which aims to establish the careers of the next generation of world class British scientists – the investment will enable researchers at universities and businesses to progress their studies quickly by funding essential equipment and paying for researcher wages.

Science Minister Amanda Solloway said:

We are putting science and innovation at the heart of our efforts to build back better from the pandemic, empowering our scientific leaders of tomorrow to drive forward game-changing research that could improve all our lives and boost the UK economy.

Supported by £113 million, the Future Leaders Fellowships will equip our most inventive scientists and researchers across the country with the tools to develop and bring their innovations to market quickly – all while helping to secure the UK's status as a global science superpower.

UKRI Chief Executive, Professor Dame Ottoline Leyser, said:

I am delighted that UKRI is able to support the next generation of research and innovation leaders through our Future Leaders Fellowship programme.

The new Fellows announced today will have the support and freedom they need to pursue their research and innovation ideas, delivering new knowledge and understanding and tackling some of the greatest challenges of our time

The government has committed over £900 million to its Future Leader Fellowship initiative over 3 years. The projects being backed today will be an important part of the government's ambition to cement the UK's status as a global leader in science, research and innovation, as set out through the publication of the [Innovation Strategy](#) in July.

Today's funding forms part of the government's commitment to increase public spending in research and development (R&D) by £22 billion by 2024 to 2025,

putting the UK on track to reach 2.4% of GDP being spent on R&D across the UK economy by 2027.

Other projects announced

Below are some of the other projects that have been announced today.

University of Glasgow

Dr Emily Draper from the University of Glasgow will lead a project to develop organic materials to replace environmentally damaging and expensive metals in everyday smart devices such as tablets and smartphones. Today, new environmentally friendly materials are often discovered by chance and then a use is found for them. Dr Draper's research aims to produce a predictive model that will allow organic materials to be developed to suit an intended purpose.

Elasmogen Ltd

Dr Obinna Ubah at Elasmogen Ltd will lead a project to deliver a new type of therapy that overcomes the limitations of traditional antibody therapies currently used to treat autoimmune diseases, like arthritis and Crohn's disease.

Unlike antibody therapies, the new drugs developed by Dr Ubah will be capable of being used to treat more than one kind of disease, will not require an injection, and will not themselves trigger an adverse immune response. This means they will be able to be used for a much longer period than antibody therapies to treat serious autoimmune diseases.

University of Bristol

Dr James Byrne at the University of Bristol aims to understand how iron-containing minerals found in the ground can act like natural batteries – known as biogeobatteries. Dr Byrne's project will investigate how bacteria use these batteries to generate and store energy. It is hoped this work will help us to address the challenges of today's energy storage demands and build a more sustainable future.

University of Liverpool

Dr Joshua Dean at the University of Liverpool is leading a project that will use urban waterways, such as canals and rivers, to work out how to measure and map the origins of and reduce methane emissions.

Methane is a greenhouse gas 86 times more potent than CO₂, and more than half of methane emissions come from human activity. Part of the research will involve mapping how urban waterways deliver methane into the atmosphere, for example through leaking gas pipes.

Notes to editors

The [Future Leaders Fellowships scheme](#), which is run by UK Research and Innovation, helps universities and businesses in the UK recruit, develop and retain the world's best researchers and innovators, regardless of their background. They can apply for up to £1.5 million to support the research and innovation leaders of the future, keeping the UK at the cutting edge of innovation.

Each fellowship will last 4 to 7 years. Awardees will each receive between £400,000 and £1.5 million over an initial 4 years.