

10 projects funded to extend UK's leadership in Earth Observation

The flagship SERMON project led by RAL Space and supported by the UK Space Agency will use microwaves to examine the atmosphere in order to improve weather forecasting.

The equipment will be tested onboard a converted aircraft but could in future be deployed on small satellites or high-altitude drones.

Other UK Space Agency supported projects include developing 3D printing techniques which could lead to light-weight materials being used instead of metals for key components of weather satellites, reducing weight and cost, and improving gravity measurements which are important for our understanding of climate science and oceanography.

Graham Turnock, CEO of the UK Space Agency said:

It's incredible to think that with the touch of a button we can direct firefighters to the precise location of wildfires in Australia and observe detailed levels of air pollution over London, but these are just two examples of Earth Observation space technology in action.

Earth Observation technology provides us with the eyes and ears for monitoring our planet and underpins dozens of scientific fields, from oceanography to meteorology, so I'm delighted to announce this new funding which is being matched by industry to maintain momentum in science innovation, job creation and growth.

This investment has come through the [Centre for Earth Observation Instrumentation](#) (CEOI), which is the UK Space Agency's national Earth Observation technology R&D funding programme.

The funding was announced this afternoon at the Policy Exchange think tank in London UK, where Science Minister Chris Skidmore made the keynote speech.

The ten projects receiving a share of £2m are split into Pathfinder, Fastrack and Flagship categories.

The Pathfinder projects include an innovative flat lens from the University of Glasgow which would save weight over traditional curved lenses and a reconfigurable software defined radio receiver called Babel, developed by In-Space.

The FastTrack projects HYMAS-X, 3DPAMS and META-TEL from the Universities of Cambridge, Cardiff and the National Physical Laboratory will deliver technologies to improve remote sensing of the atmosphere, for more accurate

weather forecasting and monitoring air quality.

LEGO from the University of Surrey and CAGE from Teledyne e2v will develop gravity sensors, useful for studying the Earth's surface in fields such as oceanography, climate science, and oil and gas prospecting.

Other FastTrack developments include Leonardo and Surrey Satellite Technology Limited (SSTL) adapting an infrared camera which could be used to monitor fires, volcanoes and human activity from space and a project from Craft Prospect Limited which will aim to improve the operation and management of small satellite constellations.

The global satellite-based Earth Observation market is buoyant and growing. Market studies estimate that the industry was worth \$43.7 billion in revenue in 2017 and is expected to reach \$66.1 billion in 2020.

The UK has world-leading satellite Earth Observation capability, from developing and building missions to managing and exploiting data and creating trusted applications and services. Earth Observation services are already supporting £92 billion worth of the wider UK economy and are growing rapidly.

As part of the Government's Industrial Strategy, the UK Space Agency is building on this strength while growing our share of the global space market.

Finance sector backs British business women

Plans to increase the number of British female entrepreneurs have taken a leap forward, with major banks and venture capital firms signalling their support

Published 16 July 2019 From: [HM Treasury](#) and [Robert Jenrick MP](#)



Plans to increase the number of British female entrepreneurs by half have taken a leap forward today, with major banks and venture capital firms signalling their support.

Royal Bank of Scotland, Barclays, Lloyds Banking Group, Santander, TSB, Metro Bank, the Co-operative Bank and Bank of Ireland UK have today all signed up to the Investing in Women Code, alongside venture capital firms Frontline, Episode 1, and Angel networks UK Business Angel Association, Angel Academe, and institutional investor British Business Bank.

The Investing in Women Code is a commitment to support female entrepreneurship in the UK by improving women's access to the advice, resources and finance needed to build a business.

It comes after an independent review – commissioned by the Treasury and headed up by Alison Rose, Deputy CEO of NatWest – identified barriers faced by female entrepreneurs and what could be done to overcome them. The Rose Review found that only one in three entrepreneurs are women, and that businesses run by women are on average half the size of firms led by men.

Speaking at the launch of the Investing in Women Code at a reception in Downing Street, the Exchequer Secretary Robert Jenrick said:

Breaking down gender barriers could add billions to the UK economy.

I'm pleased to see so many of our major banks and venture capital firms support the code, and I call on others to follow suit.

It's shocking that only one in three entrepreneurs are women, and I hope that today's commitment signals a turning point in attitudes towards investing in female-led businesses.

Deputy CEO of NatWest Holdings and CEO, Commercial & Private Banking, Alison Rose, said:

When we began this process, everyone involved was in agreement that raising awareness of the Rose Review's findings is only one small part of what is needed; what we need is action.

The reaction from industry and the commitment that so many leading institutions have already shown towards the Code has been fantastic and encouraging, and this is just the beginning.

I'm proud that NatWest has been a leading driver behind the development of the Code, and I look forward to working with others who support it, it is going to make a real difference.

Ian Rand, CEO of Barclays Business Banking said:

Boosting female entrepreneurship is vital to the future of the country's economic growth, and Barclays is committed to ensuring we offer all the support we can to those starting and scaling their businesses.

We're delighted to be a founding signatory of the Investing in Women Code and look forward to our continued partnership as we work together to address some of the challenges facing female entrepreneurs.

Susan Davies, Managing Director, Santander Business said:

The Code represents a determination among the whole sector to tackle the barriers that are still faced daily by female entrepreneurs.

What is important for the UK economy is that a great business idea has the chance to succeed. We should always be asking ourselves if we are doing enough to help female entrepreneurs take their idea from the drawing board to the consumer.

The Code will enable financial institutions to come together to build upon our individual initiatives and ensure that the tools and the resources needed to succeed are easily available.

The Government and industry will also come together later today for the first Rose Review Board meeting to drive forward the recommendations from the Rose Review.

Alice Hu Wagner, Managing Director for Strategy & Markets, British Business Bank, said:

Collecting data about how finance providers invest in female, male and mixed-gender founder teams is an essential first step in identifying and tackling the inequalities that exist in the market.

Our recent VC and Female Founders Report, which found that all-female teams received under 1p out of every pound of venture

capital investment, has helped stimulate the right sorts of conversations about these issues. We're delighted to sign up to the new Investing in Women Code to build on this and help develop a fuller picture across UK smaller business finance markets.

Rebecca Park, Managing Director, External Affairs, UK Finance said:

Innovation and entrepreneurship are foundations for success and inclusion in our economy and society and it is important that everyone has the opportunity to contribute. Business diversity translates into UK economic growth which benefits us all.

Today's announcement demonstrates the finance sector's commitment to promote and back female entrepreneurship in the United Kingdom.

The Code builds on a number of important initiatives already underway that are helping to provide access to the right tools, resources and funding to all entrepreneurs.

UK Finance will continue to work closely with the industry to support this important initiative.

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Notes to Editors:

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For further information on the Investing in Women Code, [click here](#)

The Investing in Women Code is complementary to the Women in Finance Charter, which promotes gender equality for employees within firms in the financial services sector.

For further information on The Alison Rose Review of Female Entrepreneurship [click here](#)

Signatories to the Investing in Women Code will:

- have a nominated member of the senior leadership team (or key individual within my Angel group or network) who is responsible for supporting equality in all its interactions with entrepreneurs
- provide HM Treasury, or a relevant industry body designated by HM Treasury, a commonly agreed set of data concerning: all-female-led

businesses; mixed-gender-led businesses and all-male-led businesses. My organisation agrees that HM Treasury will collate this data and publish it on an aggregated and anonymised basis in an annual report

- adopt internal practices which aim to improve the potential for female entrepreneurs to successfully access the tools, resources, investment and finance they need to build and grow their businesses, working with relevant players in the ecosystem. My organisation will review these actions annually and make this commitment publicly available

Founding signatories to the Investing in Women Code

RBS

NatWest

Barclays

Lloyds Banking Group

Santander

TSB

Metro Bank

The Co-operative Bank

Bank of Ireland

Frontline

Episode 1

Angel Academe

UK Business Angels Association

British Business Bank

Government issues rallying call to action for historic counties celebrations

Government publishes new guidance to help local authorities recognise historic counties as a way to boost community pride.

Published 16 July 2019 From: [Ministry of Housing, Communities & Local Government](#) and [Jake Berry MP](#)



From the bear and ragged staff of Warwickshire to the golden knot of Staffordshire, a renaissance of historic county flags is well underway as the government publishes guidance to help councils celebrate the rich heritage and culture of their counties.

The [new guidance](#) helps local authorities recognise historic counties as a way to boost community pride and provide opportunities for families to learn about local traditions.

It includes consideration of placing road signs to mark the boundaries of the historic counties, flying county flags whenever possible, designing flags for counties without one and celebrating county days.

The government recently confirmed that 50 registered flags of the historic counties of Great Britain will fly alongside the Union flag in the heart of Parliament Square in support of a colourful celebration of the nation's history and culture on 23 July – Historic County Flags Day.

Northern Powerhouse Minister, Jake Berry MP, who champions the historic counties campaign in government, has this week written to the leaders of all county councils encouraging them to celebrate their historic county's heritage and proudly fly the flag for their counties on 23 July.

Minister for the Northern Powerhouse and Local Growth, Jake Berry MP, said:

Our new guidance helps local authorities celebrate historic counties, their shared heritage, culture, history and our great nation.

In government, we are throwing our full weight behind historic counties through proudly flying 50 iconic county flags in the heart of Parliament Square for Historic County Flags Day on 23 July.

I am delighted that this campaign has won support from the County Councils Network and I look forward to seeing the celebrations local authorities across the country have planned to promote historic counties in their communities.

A number of county councils have also thrown their full support behind the

historic counties campaign, including Hampshire who have recently created their own emblematic, [eye-catching flag](#). Staffordshire has meanwhile held its own Staffordshire Day celebrations earlier this year which included a 'Made in Staffordshire' theme to promote the historic ceramic and brewing heritage of the county.

The campaign has also attracted support from the County Councils Network who hosted Minister Berry earlier in the year to discuss how central government and local government can do more to promote historic counties at both the national and grass-roots levels.

Councillor Martin Hill, County Councils Network devolution spokesman, said:

County councils are an integral part of England's history and they continue to be part of people's local identity. The historic nature of counties forms a key part CCN member councils' work to promote their areas as great places to visit, live and work.

The County Councils Network welcomes the government promoting the significance of counties, both economically and socially.

At the same time, it is important that this guidance recognises the importance of existing county boundaries in enabling county councils to deliver efficient local services, such as transport and highways, and economic growth.

County councils should retain local discretion over how they use their history and identity to ensure that their 26 million residents remain clear about who is providing the services they use each day.

Historic County Flags Day is Tuesday 23 July 2019, when the people of Great Britain celebrate the nation's historic counties through the flying of flags.

The government attaches great importance to the history and traditions of this country. Our history helps to define who we are and where we come from, and we are stronger as a nation when we cherish and champion our local traditions. Understanding the past and how we have developed helps us to face the future with confidence and as a shared experience.

In 2012 the government changed Whitehall rules to allow local and county flags to be flown without planning permission, in 2014 planning guidance was issued allowing councils to put up traditional counties boundary signs and the Traffic Signs Regulations and General Directions 2016 allows the signing of historic county boundaries.

County councils and unitary counties have been encouraged to come forward with innovative ideas to bring local communities together around the history and heritage of their areas.

The Ministry of Housing, Communities and Local Government has committed to

exploring further work with a range of partners to raise the profile and maximise the impact of celebrating historic counties in the long-term.

Read the [guidance](#) issued to councils.

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Media enquiries

Email newsdesk@communities.gov.uk

Please use this number if you are a journalist wishing to speak to Press
Office 0303 444 1209

Social media – MHCLG

Twitter – <https://twitter.com/mhclg>

Flickr – <http://www.flickr.com/photos/mhclg>

LinkedIn – <http://www.linkedin.com/company/mhclg>

Restoring Estuarine and Coastal Habitats in the North East Atlantic

Thank you.

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At the Environment Agency's recent flood and coast conference, I shared a platform with the writer and broadcaster Nicholas Crane, who you probably know from the television programme: "Coast".

He says:

Britain has only been occupied for 12,000 years... It's all happened so quickly – we've gone from nobody being here at all in 9,500BC to 64 million of us being here today.

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Personally speaking, 12,000 years seems like quite a long time.

Maybe that's because I've never studied geology.

But, when experts put our present challenges in such a grand historical context I think it's worth listening.

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Speaking at the World Economic Forum in January, David Attenborough said:

The Holocene has ended. The Garden of Eden is no more. We have changed the world so much that scientists say we are in a new geological age: the Anthropocene, the age of humans.

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Last year, the Intergovernmental Panel on Climate Change said we have 12 years to hold global warming to 1.5°C above pre-industrial levels... and even if we do, the impacts of climate change – like floods, heatwaves, storms, drought, and sea-level rise – will increase.

As the Extinction Rebellion activists remind us again this week, we need to act, but last week, the Committee on Climate Change made clear:

- We are not reducing emissions fast enough.

And,

- Businesses, infrastructure, technology, and people are not prepared for weather impacts that will get worse in the next 11 years.

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The estuarine and coastal environment of the UK...(Where over a third of people live)...has changed substantially from its natural state.

Even without human intervention, the coastline has never stayed in the same place, but climate change is increasing and accelerating these processes.

England has also lost about 85 per cent of its historic saltmarsh.

We have gone from over two hundred thousand hectares to around thirty four thousand.

Some areas which have experienced 100 per cent loss of saltmarsh have not recovered in any way.

It is estimated that more than 90 per cent of our native oyster biogenic reefs have been lost.

More than 50 per cent of our water bodies no longer have seagrass where it once grew.

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But, I don't think we should despair.

Human beings are agile and can adapt.

The blue whale hanging from the ceiling, here in the Natural History Museum, reminds us of that.

In the 1800s there were 350,000 to 400,000 blue whales across the world's oceans.

After decades of commercial hunting only around 7,000 to 10,000 were thought to be left in 1966.

That year, in London, the decision was taken to legally protect blue whales.

Since then the population is believed to have grown to between 10,000 and 13,000 with some saying it could be as high as 20,000.

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This conference is about changing the story like that for the UK's coastal habitats.

Our near-shore seas and estuaries in the North East Atlantic have been transformed by human activity with significant losses of key habitats and the services they once provided.

We can reverse some of these changes and restore habitats.

The 25 Year Environment Plan sets an ambition to deliver environmental net gain and to restore marine biodiversity.

This creates the space for everyone in this room to raise their ambition higher... together.

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So how should we act?

In the government's National Adaptation Programme, the Defra Minister Lord Gardiner, wrote:

While we continue to play a leading role in international efforts to keep global temperature rises well below 2°C... our resilience will only be robust if we prepare for worse climate change scenarios.

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The Environment Agency, is a regulator, advisor and operator out to three nautical miles.

We need to protect people and businesses on the coast through flood protection schemes.

Earlier this year, we released a draft Flood and Coastal Erosion Risk Management Strategy to 2100.

We said: We can't win a war against water by building away climate change with infinitely high flood defences.

We need to be more resilient.

We need to help communities better understand their risk and give them more control about how to adapt and respond.

And, we need to look at more nature based solutions.

Last week, Minister Coffey announced a Call for Evidence on flooding and coastal erosion policy.

We will be working closely with government and partners to finalise our Strategy later this year.

As the Committee on Climate Change reported last week, society urgently needs to invest in Nature based Solutions such as afforestation, peatlands, and saltmarsh to draw down carbon and ensure that we can adapt to the impacts of a changing world.

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Today, we want to establish a network for restoration of estuarine and coastal habitats and species.

This has – remarkably – never been done before...

Certainly not across government bodies, industry, NGOs and academia.

We want you to share your knowledge and experience.

We hope to take stock of what we have lost, what projects are underway, and look to the future to see what more we can do collectively.

Afterwards we hope to develop a much larger programme of restoration.

My colleague Pete Fox will be elaborating on the opportunities for partnership in a moment.

No one organisation can do this alone.

Green Finance has a significant role to play.

In the recent Green Finance strategy, the government increased the expectation for financial institutions – and regulators – to consider the impacts of climate change within their investments.

The strategy says the government will work with international partners to catalyse market-led action to enhance nature-related financial disclosures.

This will complement the global review of the economics of biodiversity by Professor Sir Partha Dasgupta.

And, it will mirror the success of the Task Force on Climate-related Financial Disclosures' approach by supporting the private sector to develop consistent disclosures to better manage nature-related financial risks.

This is important, but we also need a large scale redistribution of capital towards the types of green assets that I hope you will discuss today.

But, we're not just talking about "green" initiatives – this work is in everybody's financial best interests.

The marine environment has a tremendous ability to recover.

Climate change threatens to overshadow protective management measures and lead to considerable loss of ecosystem services.

We need practical interventions to restore habitats, and increase ecosystem service resilience.

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I hope that today's conference helps to move the discussion about coastal habitats on from protection – to restoration.

We want to achieve greater resilience for people and wildlife at the coast: restoring, enhancing, and protecting the benefits we receive.

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All of us benefit from the coast – particularly in a country where it is never more than 84 miles away.

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Thank you very much.

Highways England on right lines to make 'ghost' markings vanish

'Ghost' road markings and blacked out lines, which can confuse drivers, could become a thing of the past thanks to Highways England's global search for a solution to the problem.

Published 16 July 2019 From: [Highways England](#)



When white road markings need to be removed, for example when road layouts change, the original lines can sometimes still appear as faint or 'ghost' marks.

The problem is worse in bright sunshine.

But Highways England's £685,000 international research project is aiming to find a solution.



'Ghost markings' which can confuse drivers could become a thing of the past.

The company, responsible for motorways and major A-roads, launched a competition which has seen products from around the world undergo tough testing in the Spanish capital Madrid – with the road markings subjected to some two million 'wheel overs'.

Now the eight winners of the competition are seeing their materials put to the test on the M5 in the south west. In addition, removing markings can cause damage to the surface with the repairs adding to the overall cost of road schemes and creating additional work. Testing is also taking place on five removal systems which could address this issue.

Corporate Group Leader Martin Bolt, who has been overseeing the competition for Highways England, said:

We know 'ghost' markings on any roads, not just ours, can be confusing for drivers and autonomous vehicles so we set out to find a solution which makes a real difference not just for road users on our network but across the globe.

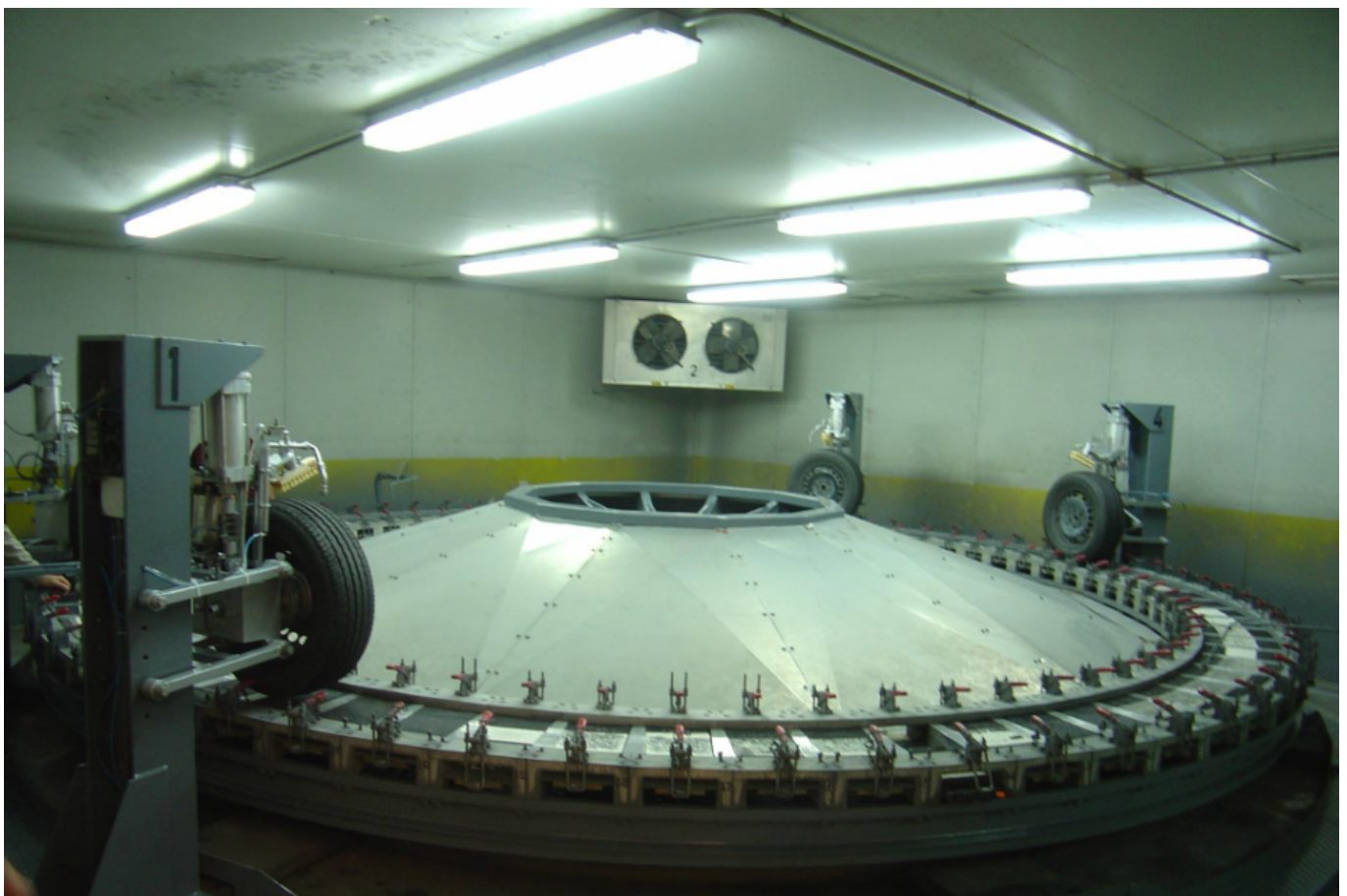
There is a worldwide problem with road marking removal and it is the first time the industry has been challenged like this.

We're hoping the outcome of the competition will give us a greater understanding of the materials and processes we, and the road industry, should be using in future schemes, and will help drivers on their journeys.

The competition, launched in conjunction with Roadcare and Kier, was made possible through a £150 million ringfenced fund Highways England has for innovation projects.

The aim was to find the most effective road markings that will also reduce damage to the surface when the lines are removed.

Thirty-six entries came in from around the globe with applicants asked to send samples of their product for testing which has been taking place at an industry-recognised centre in Madrid.



Road markings have been tested with two million 'wheel overs'.

Eight winners have now been chosen in the Transforming Road Markings competition and their materials will be tested in all weathers on the M5 in the south west over the next 12 months.

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

Keith Dawson, managing director of Roadcare, said:

Competitors from across the globe have told us how refreshing and inspiring it has been that Highways England is leading the way in looking for solutions to what is an international issue. They are fully supportive in helping to find a sustainable solution to the road markings challenges.

Scott Cooper, managing director of strategic highways at Kier, commented:

By working collaboratively with our client and supply chain partners such as WJ, Wilson and Scott and Roadcare we have been able to continue to develop and deliver new ideas, products and processes.

These will help deliver safer roads as scarring and ghosting will disappear. The customer experience through roadworks will improve as a result of clearer markings and finished schemes will have a much cleaner appearance.

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.