

**“Fast-tracking this new material to a trial on the strategic network in record time as part of National Highways’ innovation programme represents another important example of how our industry can rapidly develop and trial innovations, getting them from the laboratory and out on to the road network.”**

Tim Smith, Senior Technical Manager (South East) at Tarmac

# Solutions

## Sustainable Construction

### *Carbon-negative aggregate with National Highways*

A new carbon-negative aggregate is being trialled on a stretch of motorway as part of National Highways’ hunt for new and innovative solutions to help reduce its carbon footprint. The ‘next generation’ construction material was identified in a competition run by National Highways which offered funding for projects that would help meet targets for net zero carbon in maintenance and construction.

Four firms received up to £80,000 each to make their vision a reality and now the first of those – Seaham-based company Low Carbon Materials – has been able to trial their ACLA® carbon-negative aggregate on a National Highways road for the first time.

With the support of both Skanska and Tarmac, the trial is taking place on the northbound carriageway of the M11 in Essex, and has been incorporated into essential resurfacing and maintenance work between junctions 7 and 8. Here it will be subject to ‘real world’ levels of heavy traffic and will have routine monitoring by National Highways.

A test strip of asphalt concrete binder course containing Low Carbon Materials’ product has been laid alongside a control test strip containing 100 per cent conventional aggregate. It is hoped the carbon-negative aggregate will make a significant impact on National Highways’ carbon emissions with minimal change to standard procedures.

Dr Joanna White, National Highways’ Research, Development and Innovation Director, said: “Solutions like this could have a real impact on our road to net zero carbon so we are delighted that we have been able to accelerate the development of the product and get it on one of our roads for testing.

“Collaboration is the key to innovation so we are grateful for the support of our supply chain partners Skanska and



Tarmac who have helped make that happen. Testing the asphalt in real conditions on a heavily trafficked motorway, under close scrutiny, will be far more effective in proving the durability of the product and hopefully its success.”

Last year, National Highways launched the Accelerating Low Carbon Innovation competition in collaboration with Connected Places Catapult. It is the latest competition supported by Designated Funds, ring-fenced funding used to support initiatives that deliver lasting benefits for road users, the environment and communities across England.

Natasha Boulding, CEO of Low Carbon Materials, said: “I’d like to thank National Highways, Tarmac, Skanska and Connected Places Catapult, for their invaluable support in piloting ACLA® at speed. We are excited by National Highways’ recognition of the potential of our carbon-negative aggregate. A motorway trial represents a significant step towards lower carbon roads and widespread adoption. ACLA® offers a simple and scalable solution that can be readily adopted by National Highways in their pursuit of their net zero targets.”

Paul Cole, Skanska Chief Engineer, said: “The National Highways’ Accelerating Low Carbon Innovation programme has exceeded my expectations. The programme matched Tier 1 contractor Skanska and existing supply chain partner Tarmac with SME Low Carbon Materials (LCM). Subsequently, a formidable collaborative working relationship was formed. The challenge was to responsibly bring LCM’s new product to market as quickly as possible. The programme has been very successful and National Highways’ Safety, Engineering and Standards teams have supported it throughout.”