



Centre of Excellence
for Decarbonising Roads

Q1 REFLECTION 2026

QUARTERLY NEWSLETTER



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Welcome back to our quarterly newsletter looking at the first quarter of 2026 for the Centre of Excellence for Decarbonising Roads (CEDR), a Live Labs 2: decarbonising local roads theme – part of the ADEPT Live Labs 2: decarbonising local roads programme, a three year £30 million UK-wide initiative, funded by the Department for Transport that aims to decarbonise the local highway network.

UK CENTRE OF EXCELLENCE FOR MATERIALS

A hub for research and innovation for the decarbonisation of local roads materials, developing a knowledge bank, real-life conditions testing and sharing and learning insights.

Lead Local Highways Authorities (LHAs):

North Lanarkshire Council & Transport for West Midlands.

In this issue, you will find the latest highlights, trials, evaluations, and thought leadership from the Centre.



Highlights of the quarter

Moseley Park School | Careers Talk

In March, three colleagues from the South Campus—Febin Fathima (Carbon Lead), Joseph Webster (Project Coordinator) and Joseph Kimberley (Project Manager)—were welcomed at Moseley Park School, where they delivered an inspiring careers talk to Year 7 pupils.

The session explored each of their career journeys and offered pupils a first-hand look into the diverse opportunities within the roads and transport sector.

Students gained insight into how transport, engineering and construction work together to support society and drive communities towards sustainability, while discovering the wide range of roles—both technical and non-technical—needed to make this possible.

Recent events

Barriers to Decarbonising Roads Sandbox



In February, with Safetytech Accelerator, we held the Shaping the Future of Road Innovation event in Manchester.

The event explored the barriers faced in bringing innovations to market, influences, and industry improvements that can be implemented to drive road maintenance forward and make adoption easier.

The day hosted a panel of experts from a range of backgrounds and experiences – including our own Alex Morgan (Project Manager) and Scott Walker (Road and Asset Services Manager) - and sparked diverse discussions, illustrating how bringing multiple viewpoints together fuels innovation.

Key takeaways from our Sandbox highlighted:

- The importance of considering barriers during innovation
- The challenge of innovation without a structured approach
- Organisations must extensively evaluate their market readiness, outline key priorities and understand system dependencies, and demonstrate and justify why an innovation should be adopted.

As we continue working with partners across the sector, events like this play a vital role in shaping a future where innovation can move from concept to real-world impact with greater clarity and confidence.



APSE - Association for Public Service Excellence

APSE (the Association for Public Service Excellence) is a not-for-profit organisation that supports local government, working with more than 250 councils across the UK. Dedicated to promoting high standards in public services, it offers a nationwide support network for service providers by conducting research, producing detailed reports, and leading campaigns that strengthen the role of local government, enabling them to deliver high-quality, effective, and efficient public services.

In March, APSE invited Elaine Nicol (Road Maintenance Manager) to speak about the Centre at their 2026 Highways, Street Lighting and Winter Maintenance seminar in Newcastle. Elaine shared our project mission, trial insights and the importance of reducing carbon in all areas of road maintenance.



Interchange 2026

Interchange brings together industry leaders to explore the forces driving change across the roads sector — from environmental pressures to digital transformation and beyond.

In early March, we joined fellow Live Labs 2 projects to present at Interchange 2026. The event offered a valuable platform to share the Centre's background, insights, and progress, while giving attendees the chance to connect with our team. It also highlighted our ongoing successes, the challenges we're addressing, and our role in supporting the sector's journey toward net zero.





PIARC 17th Winter Congress 2026

March hosted PIARC's 17 Winter Congress for Road Winter Service, Resilience and Decarbonisation. This event serves as a key forum for collaboration between industry experts and leading innovators, focused on shaping the future resilience and sustainability of road infrastructure. Centred on this year's theme, "Ensuring road excellence in all seasons," the event showcased cutting-edge approaches to winter service, climate adaptation, and decarbonisation — highlighting the strategies that will define the next generation of road management.

Key highlights:

- Our team connected with delegates from across the world — including Portugal and Japan to Mexico, France, and even a few familiar faces from the UK.
- Hearing our Innovation Business Partner, Lauren SeBlonka, share key project insights during the Driving Decarbonisation with Road Investments and Decarbonisation of Construction and Maintenance technical sessions.
- And not to forget... cheering on the contenders at the legendary Snowplough Championships 2026.

Engaging with our international community is essential for CEDR. These conversations help raise awareness of our work and support the wider roads sector as we collectively drive towards a net-zero future.

RECENT TRIALS

Asphalt Preservation Trials - Phase 2

What We Did (Phase 1 & Overall Programme)

Phase 1 of the asphalt preservation programme focused on evaluating a suite of rejuvenators, preservers, and sealers across mid-life pavements—typically around ten years old—on representative West Midlands sites.

The team implemented controlled, evidence-led trials using four products (*Reclamite, Pentack, Everphalt and Rhinophalt*), supported by rigorous baseline testing including SCANNER surveys, Falling Weight Deflectometer measurements, visual inspections, core sampling, and laboratory binder analysis.

Treatments were applied under real-world operating conditions with matched control sections to allow direct comparison of performance, carbon impact, operational practicality, and lifecycle behaviour.

This phase established a strong technical foundation, confirming the feasibility of preservation methods, their potential carbon and cost savings versus resurfacing, and the importance of condition-based selection.



Why Phase 1 Evolved into Phase 2

The results from Phase 1 demonstrated that product effectiveness is highly dependent on pavement age, binder condition, and surface porosity—highlighting a need to understand how treatments behave earlier and later in the pavement lifecycle.

Supplier guidance and initial laboratory findings indicated that many rejuvenation benefits are maximised when applied earlier in the life of the asset, while waterproofing preservatives may offer more value on high-traffic or higher-risk networks irrespective of age.

To build a more complete evidence base, Phase 2 expanded the study to pavements between one and fifteen years old and across a broader set of road types and loading conditions.

This allowed the team to test optimal timing, verify long-term applicability, refine operational learning from Phase 1, and generate more robust, scalable recommendations for local authority adoption.



POTHOLE PHASE 2

What We Did (Phase 2 Pothole Materials Investigation)

Phase 2 of the pothole materials investigation focused on evaluating seven low-carbon pothole repair products through 28 controlled and standardised patch repairs on Thimble Mill Road, a B-class residential route in Sandwell.

Each defect was artificially created using the MultiEvo Hydrohog to ensure consistent dimensions, enabling accurate comparison of carbon, cost, material behaviour, and operational performance.

The project team captured detailed operational data—including fuel use, equipment run-time, material quantities, and repair durations alongside visual and photographic inspections to monitor early-life performance and degradation.

This structured, side-by-side methodology allowed Phase 2 to build a reliable dataset that isolates product differences and supports fair benchmarking across innovations.



Why Phase 2 Was Needed / How It Evolved from Phase 1

Phase 2 was developed to progress beyond the learning of Phase 1 by moving from controlled slab testing into a fully live network environment, enabling assessment of how innovative repair materials behave under real-traffic, real-weather, and real-operations conditions.

Insights from Phase 1 highlighted the need for more precise carbon measurement, consistent defect geometry, and richer operational data — leading Phase 2 to standardise defect creation, weigh materials precisely, monitor fuel and power use, and incorporate operator feedback.

The expanded product set, structured comparability, and ongoing visual monitoring were designed to generate robust evidence that can support Local Authorities in scaling low-carbon materials into business-as-usual maintenance, ensuring that selection decisions are based on real-world performance rather than lab-only results.





Strathclyde Country Park Trials

In the first quarter, we collaborated with two of our Sandbox suppliers, Ecopals and Sima, to advance testing of their flagship products.

Ecopals

Ecopals is a German startup focused on turning plastic waste into advanced materials for road construction. Its flagship product, EcoFlakes® is a cutting-edge polymer modifier engineered for asphalt applications. By integrating recycled plastics into asphalt mixtures, EcoFlakes® improves road durability, lowers carbon emissions, and contributes to the broader shift toward a circular economy. The technology has already been deployed in more than 40 construction projects across over seven countries.

PolyPave

Sima Environment is a specialised asphalt additive company developing sustainable solutions without sacrificing performance. Its product, PolyPave, is a bitumen extender made from recycled ultra-low-density polyethylene (ULDPE). Delivered as granules in bulk bags for easy handling, PolyPave is added directly into an asphalt plant mixer, where it melts and blends uniformly with bitumen. With a density of 400 kg/m³ and a melting point of 95–125 °C, it provides an efficient alternative to virgin bitumen. Its low density allows 1 kg of PolyPave to replace 3 kg of virgin bitumen, maintaining binder volume and material richness. This makes PolyPave a scalable, practical solution for more sustainable road construction.

Quarterly Spotlight

Alisha McKinlay

Communications Lead

Can you describe your role as Communications Lead?

As Communications Lead, I am responsible for the implementation of our strategy, coordinating content that will raise awareness of CEDR, strengthen engagement across our community and ensure our mission and project progress are communicated clearly and consistently to our target audience.

I work closely with our project teams to translate complex technical work into accessible stories that highlight the innovation, collaboration, and real-world change happening across the programme. This includes leading our external communications, managing digital channels, supporting events, and developing content that showcases our achievements and the collective effort driving decarbonisation forward.

What inspired you to pursue this career?

I began my career as a marketing graduate working in digital and social media marketing. These roles were incredibly engaging, and the creativity involved in content production was far from boring. As my career progressed, I became increasingly interested in applying my skills to work with long-term value and societal benefit, which ultimately led me to the roads industry.

What is the most rewarding part of your job?

Knowing that my role helps shape the future of our road infrastructure, and contributes to benefits for society both now and in the years ahead — makes me proud to be part of CEDR and to work within the roads sector.

Upcoming Events

LCRIG, Innovation & Learning Festival June 2026, Warwickshire, England

The LCRIG Innovation & Learning Festival 2026, taking place in Warwickshire, is an event for professionals committed to advancing highways maintenance and transport technology. The festival brings together local authorities, supply chain partners, industry bodies, and innovators for two days of hands-on learning, collaboration, and knowledge sharing.



What's next?

- As the project finalises, end of project reports will be made available on our website - <https://decarbonisingroads.co.uk/news/>
- Developments to the knowledge bank will continue to enhance capability and user experience

Project Milestones

The Centre has made significant progress over the past three years, testing low-carbon road materials, conducting real-world trials with local authorities, and building our Knowledge Bank - an open source hub of data. Through strong collaboration across councils, industry, and academia, the Centre has helped accelerate the adoption of proven, lower-carbon materials across the UK's road network. As the programme concludes, we're taking time to reflect on our progress, and throughout 2026 we will continue monitoring our trials, analysing data, and sharing insights with our stakeholders.

65 material
innovations
tried

Barriers to
Decarbonising
Roads Sandbox

Knowledge
Bank launch

108.1362 tonnes
CO₂e saved from
North Campus
comparison trials