



Centre of Excellence

for Decarbonising Roads

Quarterly Newsletter

Q3 2025 Reflection



Department
for Transport



Transport for
West Midlands

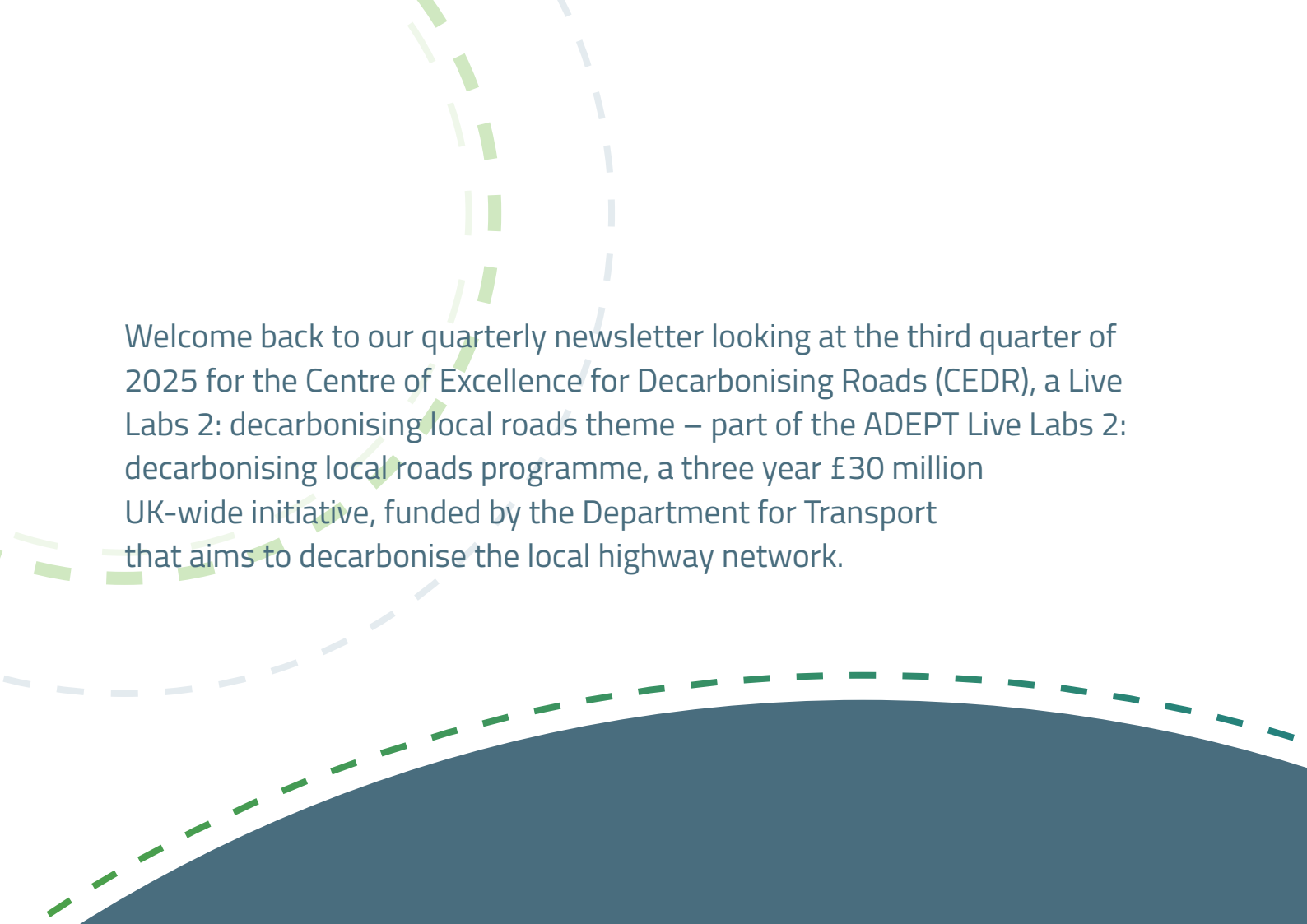
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Welcome back to our quarterly newsletter looking at the third quarter of 2025 for the Centre of Excellence for Decarbonising Roads (CEDR), a Live Labs 2: decarbonising local roads theme – part of the ADEPT Live Labs 2: decarbonising local roads programme, 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

Knowledge Bank

Following a soft launch at Highways UK, the Centre officially launched our Knowledge Bank (KB) on the 29th October! As the centrepiece of this Live Lab, the KB offers local authorities a free digital platform to access a low-carbon menu of materials, share their own case studies, interact via peer reviews of materials, and even calculate their A4 (transport) carbon. The KB is in its first release, and we are looking for feedback and feature requests for our next phases of development over winter.

It has been a significant development journey, starting from initial behavioural research with Thinks Insight to wireframing to iterative design. We've hosted focus groups and 1-1 sessions with Local Authorities and suppliers alike - all with the ambition of making the KB as useful and impactful as possible. It is with pride and gratitude that the KB has experienced such a warm welcome from the sector, with over 50 attendees to our launch webinar and even more users online.

[Link to Knowledge Bank](#)

Please upload your case studies, leave a review, drop your feedback to our email, or even join us as an early tester for the next phase of development. We know the Knowledge Bank will only come alive once it has the evidence and input from the sector, and we can't wait to see your contributions!

Recent events and engagement

NAPA International Road Forward Summit, Chicago

At the NAPA International Road Forward Summit held in Chicago from 29 September to 1 October 2025, Lauren SeBlonka represented Live Labs 2, North Lanarkshire Council, and Amey in a high-profile panel on International Innovation. Moderated by Carsten Karcher, Secretary General of the European Asphalt Pavement Association, the panel featured global experts from the UAE, Belgium, Japan and Australia. Lauren's presentation focused on the UK's asphalt industry sustainability and decarbonisation challenges, showcasing how the Live Labs 2 Centre of Excellence model has enabled centrally funded innovation to drive locally delivered net zero activity. Her insights highlighted the impact of increasing devolution in the UK, the constraints of asphalt production in remote regions like the Scottish Highlands, and the behavioural and technical barriers to adopting low-carbon materials. The session was part of a broader summit agenda aimed at sharing best practices and fostering international collaboration in sustainable pavement technologies.





LCRIG Strictly Highways

We attended the LCRIG Strictly Highways event in Blackpool at the beginning of October.

Throughout the event Paul Brown Principal Operations Manager, Joseph Kimberley Innovation Manager and Alisha McKinlay Media and Communications Officer spent our time engaging with industry leaders and sharing and gaining knowledge on the future of highways.

Visitors to our stand gained insight into our recent trials across the country, and the anticipated introduction of our knowledge bank. Many also tried their hand at building the best carbon friendly road with our interactive 'Build-a-Road'.



Midlands Highways Alliance Annual Event

The Centre was delighted to participate in the Midlands Highways Alliance Annual Event at Loughborough University, joining a distinguished lineup of speakers including Simon Wilson, John Lambe, and many others.

During the event, Innovation Manager Joseph Kimberley introduced the then upcoming CEDR Knowledge Bank, offering Local Authorities an exclusive first look ahead of its official launch which happened in late October.

The Knowledge Bank serves as an open-access repository focused on low-carbon road materials, enabling users to conduct targeted searches and access reliable, evidence-based information.

Recent trials

Project Pothole

As part of our commitment to exploring low carbon solutions, we reached a major milestone with a pivotal pothole repair trial in Sandwell.

In collaboration with Sandwell Metropolitan Borough Council and the skilled team from JA Bates, we installed 28 patch repairs, seven unique materials trialled side-by-side. This approach allows us to evaluate both carbon impact and long-term performance under identical conditions.

These trials mark Phase 2 of our broader investigation into sustainable pothole repair materials. Building on successful work from the North and South Campus programmes, this initiative strengthens the evidence base for greener, more durable solutions across the UK road network.



Supersite

Over a dedicated two-kilometre section, the SuperSite in North Lanarkshire conducted a direct comparison between conventional Hot-Rolled Asphalt (HRA) and straight pen bitumen, and emerging low carbon alternatives. This side-by-side trial assessed each material's durability and environmental footprint, providing valuable insights into their long-term performance and sustainability.

The SuperSite trial evaluated six different surface course materials alongside two in-situ recycling techniques applied to the binder course:

- In-situ Recycling with calcinate clay (SPL)
- Regen (Colas)
- Gipave® (graphene- and plastic-modified asphalt)
- Styrelf PMB (elastomeric bitumen)
- UltiPave Bio (biogenic binder)
- Hardipave™ & Milepave™ (grouted macadam)
- One of the first ever trials of 'warm' Hot-Rolled Asphalt (HRA)

This comprehensive study supports our pursuit of more sustainable, high-performing road construction methods.



Meanwhile, across live road networks in Coventry and Walsall, the South Campus resurfacing trials explored a diverse mix of low-carbon surface and binder materials. These trials included control sections to enable direct performance comparisons and were designed to compliment the findings from the South Campus SuperSite.

We tested several innovative additives and technologies, including:

- **Graphene**
- **Lignin**
- **Foamix Eco with ACLA**
- **Foamix Eco with Biochar/Lignin**
- **Biochar**
- **Polymer Modified Bio Binder**

Each trial section underwent extensive laboratory testing to quantify carbon savings and assess material performance. In addition, our team carried out routine visual inspections to monitor durability over time.

All results will be published in our online knowledge bank, helping UK highway authorities make data-driven decisions that support low-carbon, high-performance road maintenance.





Winterpave

In our exploration of low carbon road materials, we recently conducted Scotland's first Winterpave trial in North Lanarkshire. Developed by Iterchemica, using advanced microcapsule technology, Winterpave is designed to help prevent ice formation on pavement surfaces – subsequently lowering carbon due to the eradication of the requirement for grit.

ACLA

We continued our sustainability journey with the successful installation of ACLA aggregate for asphalt at two North Lanarkshire Council car parks in Coatbridge.

ACLA uses an aggregate derived from a material that has already captured carbon dioxide from the atmosphere. This CO₂ is stored within the aggregate—and by extension, within the road itself.

Even after installation, ACLA continues to actively sequester carbon, contributing to long-term emissions reduction in road construction and maintenance.



Quarterly Spotlight

Joe Webster

Carbon Reduction Project Co-ordinator



As a Carbon Reduction Project Co-ordinator for the South Campus, my responsibilities include assisting with the development, delivery, data-collection for and post-evaluation of the project's low-carbon trials, stakeholder communications and management, completing all the necessary project monitoring and evaluation, developing low-carbon training, assisting with events, and budget management. Essentially, I provide project support across all areas where necessary, ensuring that the project hits all delivery targets.

I see climate change and working towards the reduction of our emissions as one of the most important challenges of our time. I find working in such an important, ever-evolving field not only extremely interesting, but also rewarding. I look forward to a long career helping the industry move towards a low-carbon, sustainable future.

The most rewarding part of my job is not only knowing that what I do has a wider impact on a real-world issue, but also seeing the measurable changes the project is making within the sector. Having the opportunity to grow as an individual whilst helping the environment and wider industry is extremely fulfilling.

Upcoming events for the centre

Road Expo Scotland

26th – 27th November 2025, Glasgow

Road Expo Scotland stands as the nation's premier event for the road, traffic, and transport industries—uniting public and private sector leaders to help shape the future of mobility and infrastructure.

This dynamic gathering serves as a key platform for collaboration, knowledge exchange, and accelerating sustainable progress across Scotland's transport network.

Visit our stand to discover pioneering approaches to carbon reduction in road construction materials and learn how we're advancing decarbonisation across the highways sector.

[Sign up](#)

What to expect in next quarter's newsletter

- Barriers to Decarbonising Roads Sandbox (BDRS) final showcase event at the end of January, hosted by our partner Safetytech.
- Completion of our on-the-ground behavioural change research with Thinks Insight, including co-creation workshops with operatives, inspectors and engineers.
- Final trials, including wrapping up of Pothole Phase 2 and further sandbox SME trials.
- Publication of carbon and technical evaluations across both campuses.
- Outreach at events, including Road Expo Scotland.

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Contact Us

Enquiry Form

Get in touch with our team to discuss the Centre.

Innovators Form

Submit your low-carbon solution for consideration within our materials testing programme.

Share Your Innovation



Visit our website