



# Centre of Excellence

for Decarbonising Roads


## Quarterly Newsletter

February 2025



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Welcome back to our quarterly newsletter 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.**



# Updates on last quarter

## Carbon evaluation and baselining

The carbon evaluation and baselining approach is an integral component of the Live Labs 2 project, aimed at quantifying the carbon impacts of innovative materials and methods trialed in highway construction. This assessment establishes a carbon baseline using standard life cycle stages (A1-A5), incorporating benchmarks derived from traditional materials or construction methods (Business as Usual, BAU). The goal is to measure and compare the carbon performance of trial innovations against these established standards to identify potential environmental benefits.

As part of our commitment to achieving net-zero targets, we are utilising the Future Highways Research Group's (FHRG) Carbon Analyser tool to enhance our carbon evaluation and baselining practices.

Our data collection has focused on two key methodologies: inventory-based carbon accounting and activity-based carbon analysis. The inventory-based approach calculates carbon emissions by identifying significant sources within the Local Authority's control, as well as emissions from supply chain partners. Conversely, the activity-based method assesses emissions generated by specific commissioned activities during the reporting year.



To ensure consistency and thoroughness, our data collection includes measurements of electricity, water, gas, and fuel usage, as well as commute distances, vehicle fuel types, and quantities of purchased products and services. We are currently conducting various trials and demonstrations across multiple authorities, utilising established carbon calculators such as the FHRG Carbon Analyser and One Click LCA to accurately assess emissions from these activities. We have now successfully completed a full carbon baseline using the inventory-based approach for a number of Local Authorities and are actively progressing with activity-based carbon baselining for the remaining.






# Highlights of the quarter



Delivering sustainable  
infrastructure solutions  
enhancing life, protecting  
our shared future



During the past quarter, the Centre has achieved notable advancements in many of our trials, successfully completing physical testing phases. We are currently analysing data collected from these trials to evaluate their performance and progress further.

As part of our partnership with Connected Places Catapult (CPC), an international market scan of leading low-carbon road materials was completed. CPC then reported emerging themes, routes and innovations to be considered in our material selection process.

In October, we had the privilege of receiving the Net Zero Award of 2024 at Highways UK, acknowledging our significant efforts in reducing carbon emissions and addressing environmental challenges. We also participated in Strictly Highways and Road Expo Scotland, where we shared our initiatives with other local authorities and suppliers, and acquired valuable insights into new methods and materials available in the market.

[Read the report](#)

# Recent events

## Strictly Highways UK

From the 1st to 3rd October, the CEDR team attended and exhibited at Strictly Highways. Hosted by the Local Council Roads Innovation Group (LCRIG), this event was an amazing opportunity to expand our professional network and spread awareness and information about the project. The event brought together the highways community and celebrated the amazing work that is taking place in our sector.

The event consisted of three days, with two days of exhibiting, alongside two networking events and an awards night – in which our apprentice Joseph Webster was shortlisted for the 'Apprentice of the Year' award. These three days were greatly beneficial, allowing us to engage with both public and private sector stakeholders.

[Register for event](#)

## Autumn Conference Future Highways Research Group (FHRG)

On the 10th of October, we were given the opportunity by Proving Services to present our Live Lab to the FHRG membership group. This was an excellent quarterly get-together covering a variety of updates from ADEPT, FHRG and Highways Magazine and included a sobering (but fascinating) overview of the challenges we face with climate adaptation and the requirements of our future roads to be able to cope with extreme weather – from Andrew Warrington (Arcadis).

This event highlighted how valuable it is to bring together these groups of authorities, alliances and research programmes, and amplified the importance of supporting the public sector in making informed and carbon-led decisions. Moreover, it amplified to us the need for the Centre of Excellence to publish our findings for the benefit of stakeholders.

We are now halfway through the 3-year programme and are working on a content-release process to start publishing resources on our website and disseminate our findings. Over the next few months we will be publishing our Innovation Log, containing over 400 innovative products and processes, as well learnings from all demonstrators that we have delivered this year.



# Highways UK

## EXCELLENCE AWARDS

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### Highways UK

On the 16th – 17th of October, the Centre of Excellence team attended, exhibited and presented at Highways UK. Over the two days, the team had fruitful discussions with suppliers, local authorities and other colleagues about the programme and key learnings from the first 18 months of Live Labs 2. Our North Campus was also successfully awarded the Highways UK Net Zero Award for the pothole trial methodology, enabling a comparative carbon and technical assessment of leading low-carbon materials.

[Register for event](#)

## Institute of Asphalt Technology and Institute of Highways Engineers

On the 22nd of October, Scott Walker and Lauren SeBlonka from the North Campus gave a summary of the Centre of Excellence at a dedicated event, hosted by the Institute of Asphalt Technology (IAT) and Institute of Highways Engineers (IHE) Scottish Branch, in Cumbernauld. In addition to an overview of the purpose of the programme, Scott and Lauren discussed the findings and challenges from carbon baselining and measurement; recent trials; future materials testing plans; and opportunities for further collaboration with the materials experts from IAT / IHE.

## Road Expo Scotland

Project Manager for the North Campus, Lauren SeBlonka, presented at Road Expo Scotland on the 27th of November in Glasgow, updating the Scottish roads sector on initial findings from Project Pothole, alongside open discussions on the carbon and longevity evaluation challenges that the Centre is tackling.

Register for event





# Recent trials

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The last quarter of 2024 saw the Centre progress our trials, successfully completing the physical testing phases for our Rejuvenator and Preservation, Road Markings, and Project Pothole phase 1 trials. Project Pothole has now moved onto phase 2, with sift sessions completed across both campuses. From this, promising materials have been identified for Phase 2 trials and we are liaising with suppliers.

Additionally, we are conducting carbon calculations from the completed physical trial results to evaluate their performance relative to traditional materials commonly used in highways road maintenance by both North Lanarkshire Council and the West Midlands.

Both the north and south campuses have been diligently working with our partners at Connected Places Catapult to identify obstacles to the adoption of low carbon materials. Sessions have been scheduled with stakeholders to address these barriers. Additionally, both campuses are developing a knowledge bank, which will soon be accessible to local authorities (LAs), to identify low carbon materials for future maintenance projects.

# Local Authority of the quarter

The LA we would like to highlight is North Lanarkshire Council. As the leading Local Authority of CEDR, North Lanarkshire Council continues to collaborate to search, select and trial the lowest carbon materials and methodologies in road maintenance.

Working closely with CEDR, North Lanarkshire has successfully trialed low carbon pothole repair material and road markings on the North Lanarkshire Road Network and collected and analysed the carbon data. These trials will contribute to the publication of our low carbon tool and the launch of our Sandbox and Industry Playbook in the coming months.





# Upcoming events for the centre

25th March 2025  
ADEPT Live Labs 2 Expo, Liverpool

We invite you to engage with the teams from both North and South campus when we attend the ADEPT Live Labs 2 Expo in Liverpool. Our stalls will provide an opportunity to discuss the methodology and findings from completed trials conducted in North Lanarkshire and the West Midlands. The teams will also be available to offer information regarding next steps, the utilisation of the results, and plans for future trials.

[Register Here](#)

# What to expect in next quarter's newsletter

- Progress update on Pothole Repair Phase 2 trials from North and South Campus.
- Development of planning and gearing up to start on site trials in summer for Resurfacing trials in North Lanarkshire.
- The launch of the Knowledge bank for Local Authorities to access.
- The launch of the Industry Playbook developed in conjunction with our partners at Connected Places Catapult.

[Sign Up to Newsletter](#)

# Contact Us

Get in touch with our team to discuss the Centre.

[Enquiry Form](#)

# Share Your Innovation

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

[Innovators Form](#)



