Department for Transport

ADEPT LIVELABS2 Decarbonising Local Roads

ADEPT Live Labs 2: smarter spending for the sector

- **ADEPT Live Labs 2 is the UK wide Department for Transport funded programme to cut carbon emissions and save money on local roads, introducing smarter spending for the sector.**
- **The £30 million programme has tested energy efficient ideas across England, Scotland, Wales and Northern Ireland.**
- **Seven local authorities led projects with four interconnected themes and worked with commercial and academic partners.**
- **The projects ran until March 2026 testing ways to cut carbon emissions caused by infrastructure and assets associated with local roads.**
- **The programme was designed to cut carbon emissions but it has also helped councils reduce costs, work more efficiently, boost resilience and improve repairs.**

Live Labs 2 Project Innovations

Ten strategic innovations or outputs have been achieved from across the seven Live Labs 2 projects as well as a portfolio of tactical innovations. They cover the full lifecycle from planning and procurement through to maintenance and operation, providing local highway authorities with ideas to reduce carbon, save money, and improve how roads are planned, built and maintained.

Together, these outputs show how local authorities can:

- **Save money and time**
- **Improve safety and environmental outcomes**
- **Make better, evidence-based decisions**
- **Cut carbon emissions significantly**

The ambition is to **embed low-carbon thinking into everyday highway service processes across the whole local authority highways life-cycle**, rather than treating it as an optional add-on.

About Live Labs 2 Year 4 2026/27

A further £300,000 from DfT for Year 4 will get these innovations and associated thinking out across the highways sector so they are scaled and become normal for UK roads. This will involve collaboration with industry to get the right approaches in the right places.

The programme will monitor their uptake over the next five years to see if the innovations remain effective. The new approaches have been tested on local roads. The programme's work is monitored; learning is shared and communicated to make sure the results are credible and can be used across the sector.

Can you afford to wait? Get involved

Scan the QR code to sign the decarbonisation pledge and download the projects' toolkits...

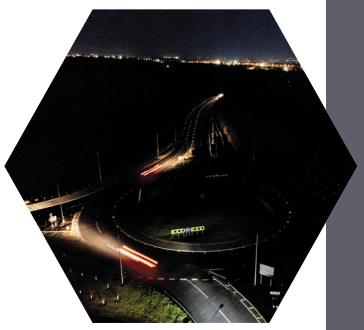
10 Strategic Innovations across the Local Highways Lifecycle

1. Smarter procurement - Liverpool

Liverpool's Sustainable Procurement and Contracting Toolkit is an interactive resource supporting the successful integration of carbon reduction initiatives into all stages of UK highways contracting. It explains rules and gives practical templates to help build low-carbon and innovative solutions into contracts from the outset.

2. Knowledge Bank - CEDR

An open online library of low-carbon materials, solutions and supporting data. It helps councils compare potential options, learn from real projects, and make quicker, better-informed decisions.



3. Carbon decision tools - Liverpool

Simple tools that help engineers choose low-carbon options in their everyday design work. They encourage avoiding unnecessary construction and selecting greener solutions early, saving both carbon and cost.

4. Doughnut decision framework - Wessex

The Highways Doughnut Toolkit brings the principles of Doughnut Economics into the road sector, helping authorities and contractors make decisions that meet people's needs while staying within planetary boundaries. The toolkit provides a structured way to evaluate both ecological and social impacts of highway maintenance activities at strategic and project levels.

5. Early contractors collaboration - Devon

Getting contractors involved early in the project design to challenge standard approaches with a focus on innovation and reducing carbon. This leads to better designs, lower costs, and reduced carbon through smarter materials and methods.

6. Rethinking roadworks - Devon

Instead of using temporary traffic lights, full road closures implemented on the Devon project is making work safer for the public and the workforce, cut carbon emissions significantly and reduce the construction period by a year.

7. Smarter street lighting - East Riding

A new approach to street lighting that focuses on safety rather than default illumination. Using data, AI and technology, the approach uses targeted lighting solutions to reduce energy use, costs and carbon while maintaining safety.

8. Reduced grass cutting - Greenprint

Cutting roadside grass less often to save money, reduce emissions and improve biodiversity. The approach tracked environmental and cost benefits and involved the local community in understanding benefits and impacts.

9. Turning grass into energy - Greenprint

Instead of leaving cut grass to decompose, it is processed into renewable energy as biogas, or biochar, which stores carbon and improves soil quality. This turns mundane waste into a valuable resource.

10. Carbon budgeting - Wessex

The Carbon Budgeting Toolkit helps local authorities understand how highway maintenance emissions evolve over time and how operational activities align with long-term decarbonisation pathways. By linking emissions data with national and sectoral decarbonisation pathways, the toolkit provides a structured way for councils to prioritise actions that reduce emissions and make consistent, data-driven decisions.

For further information visit www.adeptnet.org.uk/livelabs2

To arrange a one-to-one meeting with a Live Labs project lead please contact **emma.creasey@coastmarcoms.co.uk**