DECARBONISING TRANSPORT

NET ZERO PLAYBOOK
CONTENTS

// WHY THE TIME IS NOW

// ACROSS THE PROJECT LIFECYCLE

// STORY SO FAR
Government legislation commits the UK to a legally binding target of net zero carbon by 2050. Many local authorities aspire for similar by 2030. Whilst emissions in other sectors have fallen, transport emissions are now the largest contributor to the UK’s carbon footprint.

The Government’s Transport Decarbonisation Plan will require carbon reduction to be elevated to the forefront of decisionmaking. At WSP, we are committed to help clients meet this challenge, embedding PAS2080 decarbonisation principles across the project lifecycle.

To support our clients with this challenge, we have developed our Decarbonising Transport: Net Zero Playbook. It provides a summary of a range of innovations, analytical tools, processes and our professional experts and advisors in one place. It facilitates end-to-end services across the full project life-cycle to tackle the scale and complexity of this generational challenge, helping harness the emerging opportunities, technologies and culture required to decarbonise the transport network.

To get to net zero by 2050, we must play our part in cutting emissions associated with infrastructure systems in half by 2030. We must fundamentally rethink how we approach designs to become much more “carbon conscious” in everything we do.

That is why I am really pleased to introduce the first edition of our Decarbonising Transport: Net Zero Playbook. We are committed to working collaboratively with our partners and sharing our latest innovations across the industry to help support change in the way we do things at the pace required.

Rachel Skinner
Executive Director, WSP
156th President of the Institution of Civil Engineers
The challenge of transport decarbonisation requires action across all stages of transport development, from policy and strategy through to operation, maintenance and evaluation. WSP’s range of tools and services support our clients across the project lifecycle.
Across the **PROJECT LIFECYCLE**

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### Developing Strategies & Policies

Using our **CARBON ZERO\(^\circ\)** framework, our experts and change managers have helped develop and implement net zero strategies for Highways England and the West Midlands Combined Authority. These strategies provide a toolkit to reduce greenhouse gas emissions across the network, operations and supply chain. Our future scenario modelling has helped clients, such as Midlands Connect, to develop adaptive policy interventions that respond to emerging trends, informing the policymaking of tomorrow.

### Feasibility & Shaping Solutions

Our suite of innovative tools and industry-leading future mobility experience enables us to instil a ‘carbon culture’ as part of the solutions we develop. Our **CARBON ZERO\(^\circ\)** Appraisal Framework provides a proportionate means to assess schemes and options, from earliest stages of strategy, optimeering and concept development. Supplemented by specific capabilities in EV, logistics and an ability to assess propensity for transport choices, our transport teams can help define a range of low and zero emission mobility solutions, from shared modes to active travel, logistics and low traffic neighbourhoods.

### Innovation in Design and Construction

Our Future Ready design approach mirrors the PAS2080 reduction hierarchy of build nothing, build less, build clever and build efficiently. Our design teams are at the forefront of using technology, innovative materials and construction techniques (such as modular designs) to support decarbonisation of infrastructure.

### Managing the Assets

Using our Asset Management Maturity Assessment toolkit and best practice forum, we are sharing advice and insight with local authorities on how best to decarbonise the operation and maintenance of their highway assets.

### Monitoring & Evaluation

By tracking real world emissions following intervention, we can monitor progress and evaluate the effectiveness of different approaches in meeting the requirements of the Government’s Transport Decarbonisation Plan.
A selection of the tools and services that make up our Net Zero Playbook are shown overleaf.

Click on each tool to learn more.

Our Playbook will be updated regularly to include the latest innovations that are helping our clients decarbonise their Transport Networks.
THE STORY SO FAR

// EMISSION BASELINE STUDIES
Defining Transport Decarbonisation Pathways (across all modes) to net zero from current emission levels.

// NET ZERO STRATEGIES
Leading, enabling and inspiring practical actions to realise net zero pathways.

// CARBON ZERO® APPRAISAL FRAMEWORK
Proportionate assessment of carbon impacts (user emissions & embodied) throughout the project lifecycle.

// CONNECTED AND AUTONOMOUS VEHICLE ROAD SCORING INDEX
A methodology to assess the quality of digital and physical infrastructure required by AVs to operate safely across the transport network.

// ELECTRIC CARGO BIKES
Strategies for using e-cargo bikes to decarbonise the movement of goods and services for last mile deliveries.

// ACTIVE TRAVEL
Supporting our clients implement active travel programmes to improve health, wellbeing, address inequalities and tackle congestion on our roads.

// SHARED TRANSPORT SOLUTIONS
A new generation of projects and programmes delivering shared transport solutions that respond to the sustainable transport and decarbonisation agenda.

// FIRST MILE LAST MILE (FMLM)
Assessing propensity for uptake of different transport modes account for and assess human factors around transport choice.

// FREIGHT MANAGEMENT PLANNING
Developing comprehensive freight management strategies to mitigate impacts associated with freight movements and trips.

// PARK AND RIDE FORECAST TOOL
Supporting the analysis and forecast of demand across multiple locations.

// STRATEGIC CARBON REVIEW
A programme level assessment of the carbon performance of transport infrastructure and links to net zero pathways.

// NET ZERO ORGANISATIONAL HEALTH CHECK
Organisational Health Check designed to demonstrate the state of readiness for meeting net zero targets and preparing for the publication of the Transport Decarbonisation Plan.

// ASSET MANAGEMENT MATURITY ASSESSMENT
A toolkit for sharing best practice and insight to decarbonise operations and maintenance of the transport network and prolong the life of infrastructure.

// CARBON NEUTRAL MAINTENANCE PROGRAMME
Reducing the carbon footprint of routine highway maintenance.

// EV:READY - FORECASTING EV UPTAKE
Allowing the forecasting and scenario testing of EV update and identification of required charging infrastructure.

// SPATIAL PLANNING & ACCESSIBILITY CARBON IMPACT ASSESSMENT
Facilitating a macro level understanding of the carbon impacts associated with land use planning and local plans.
EMISSION BASELINE STUDIES

// CHALLENGE

Transport decarbonisation requires an understanding of current transport emission sources and how they will change over time, to inform what targeted, cost effective actions can be taken to achieve the emission reductions needed for a pathway to net zero. Available national data provides only high-level averages that do not afford insights on local and regional differences. Nor does it provide insight for future emissions that are needed to inform what impact different climate actions may have.

// SOLUTION

An Emission Baseline Study provides a detailed breakdown of emission sources specific to a district or region, including how they are projected to change up to 2050. This covers all public and private transport modes and gives a granular breakdown of emissions.

This data can be used for monitoring impacts of interventions when they depart from national action, and to model the impact of ‘policy levers’ and how they may affect future emissions. This might include increased home-working, economic strategy and vehicle electrification.

// OUTCOMES

The understanding gained can provide the evidence needed to set an effective climate emergency action plan that delivers a pathway to meeting net zero targets. This can also increase stakeholder and public support through demonstration of a strong evidence base upon which decisions are made.
NET ZERO STRATEGIES

// CHALLENGE

Declaration of a climate emergency and net zero targets require robust and ambitious strategies to define the direction towards net zero. However, the scale and complexity of transition makes it a challenging task to define a suitably ambitious, yet credible, net zero strategy that can withstand scrutiny and draws on best practice.

// SOLUTION

WSP can provide expert advice and technical services to support clients in developing a net zero strategy. This includes advice on the scope of emissions to consider, offsetting, benchmarking and a range of other factors. A clear roadmap details actions, their expected impact and how this charts a path to meet net zero commitments.

Informed by data collection and monitoring, a net zero strategy may also consider required organisational and cultural changes to enable the roadmap’s delivery.

// OUTCOMES

WSP has supported organisations including Highways England, Transport for the West Midlands, West of England Combined Authority and Hertfordshire County Council in developing robust, credible net zero strategies. These set a pathway to net zero success and demonstrate to stakeholders and the public that each organisation is taking the necessary action to deliver on net zero commitments.
CARBON ZERO APPRAISAL FRAMEWORK

// CHALLENGE

The greatest opportunity to influence carbon outcomes and climate resilience is in a transport project’s early stages. Established carbon assessments often only become viable as more detailed understanding of a scheme evolves. This gap risks opportunities for targeting investment to tackle the climate emergency being lost.

// SOLUTION

The Carbon Zero Appraisal Framework provides a proportionate process to ensure alignment with net zero goals and resilience to changing climate conditions. A collation of tools, methodologies and datasets, it provides a mechanism to compare schemes and options from an early stage of strategy, optioneering and concept development, with impacts grouped in three categories:

- **User emissions** – mix / characteristics of modes using that infrastructure;
- **Embodied** – construction, maintenance and end of life disposal of the asset;
- **Additional impacts / opportunities** – such as tree loss or planting.

// OUTCOMES

Its application on the £200m Leeds Public Transport Investment Programme and the £317m Leeds City Region Transforming Cities Fund Programme has shown that the early understanding of construction downside relative to user benefits may signpost the need for a change in design and ensures best value for any investment. We found that ability to demonstrate proactive decision-making based on impacts to climate can help secure stakeholder support. Additionally, we identified that the risk of watering down carbon benefits through value engineering may be reduced by better understanding the value of scheme components.
**CHALLENGE**

Locked-in car dependence is a key challenge to address in the pursuit of achieving net zero by 2050. However, it is likely that car use will remain necessary for many who live in areas which are poorly served by public transport. Autonomous vehicles (AV) are promising to provide a solution to this problem as the removal of a human driver reduces the cost of operating a mobility service dramatically. AVs rely on clear road markings and good digital connectivity to operate safely. Where physical and digital infrastructure is lacking, this could be a barrier to wider adoption of AVs, and consequently to reducing levels of car ownership.

**SOLUTION**

A road scoring methodology has been developed which assesses the quality of the digital and physical infrastructure needed by AVs to operate safely. AVs perceive the road environment in a uniquely different way to humans, using sensors rather than our senses, and therefore have their own set of unique requirements. The road scoring methodology generates a picture of where AVs could be safely deployed based on the state of current infrastructure, and where further improvements would be needed to ensure safe operation. If no physical mitigation is possible, then the route could be flagged as less suitable for AVs and a rerouting strategy proposed.

**OUTCOMES**

By assessing infrastructure assets against ideal standards, we can make sure AVs are operating in optimally safe environments. This tool aims to reduce the friction against wider adoption and provide an indication of the readiness of the road network for the inevitable arrival of AVs in the near future.
ELECTRIC CARGO BIKES

// CHALLENGE

Light commercial vehicles (LCVs) are the fastest growing sector of vehicle sales with the fleet having doubled in size since 2009, at twice the rate of the car market. Our increasing reliance on vans is exacerbating congestion, greenhouse gas emissions and noise pollution. Furthermore, there is a growing trend for the pedestrianisation of urban centres and the creation of low traffic neighbourhoods (LTNs), which make the road network less permeable to delivery drivers.

// SOLUTION

E-cargo bikes offer the potential to remove some of these vehicles from urban areas and complete the last mile much more sustainably. The main benefits are:

• Being electrically assisted, they enable the rider to efficiently transport cargo with zero emissions at street level, with some variants able to carry loads of 250kgs+.
• They can use the cycling network to efficiently move around a city.
• Their smaller size allows them to be parked more conveniently near to their destination and to have direct access to pedestrianised areas.

// OUTCOMES

We are currently working with the West of England Combined Authority to trial e-cargo bikes as part of their Future Transport Zone. They will be employed in a wide variety of use cases, from completing the last mile of delivery, through to supporting tradespeople or being made available for the community to use. Increasingly, local businesses have swapped their traditional delivery service by van for an e-cargo bike. During one of the trials single delivery by e-cargo bike emitted just 4g of CO₂ compared to 614g by the van, a 99% decrease.
ACTIVE TRAVEL

// CHALLENGE

A significant shift to cycling and walking is necessary for shorter journeys to successfully decarbonise transport. This will also bring opportunities to improve air quality, improve health and wellbeing, address inequalities and tackle congestion on our roads. The Government has committed £2bn of funding for new investment in active travel. To facilitate this, infrastructure needs to be coherent, direct, safe, comfortable and attractive, meeting the latest design standards and the needs of the local population.

// SOLUTION

- Compliance with the latest standards and future-ready principles;
- Smart network planning tools and socio-economic profiling to develop active travel networks;
- Innovative approaches to Travel Demand Management and behaviour change;
- Expertise in active mode scheme appraisal to help strengthen the case for investment;
- Dynamic and inclusive approaches to engage communities across a variety of platforms and media; and
- Monitoring and evaluating outcomes, with a focus on sharing learning and best practice.

// OUTCOMES

We are at the forefront of developments in the active travel space, leading:

- Delivery of the DfT’s Local Cycling and Walking Infrastructure Plan technical support programme and ‘Levelling Up’ business case tool;
- Development of Local Transport Note 1/20 Cycle Infrastructure Design;
- Production of user guidance and updates to the Active Mode Appraisal Toolkit;
- Updates to Manual for Streets guidance;
- Research into low traffic neighbourhoods best practice and innovation; and

By applying our innovative solutions and best practice at each stage of the project lifecycle we can help local authorities make informed investment decisions and maximise scheme benefits.
In our urban centres, increased use of shared transport solutions is essential if we are to decarbonise the transport network. Delivering shared transport solutions often requires intervention to increase reliability and attractiveness relative to other modes. It also often requires us to combine different funding streams and align strategic objectives across multiple partners and operators if public transport use is to increase.

Early and continued engagement with a wide range of stakeholders, including seldom heard groups, helps identify holistic transport solutions which balance competing demands or wants in terms of scheme design. This process should also inform the evidence and data collection process. A robust and relevant evidence base will support the wider strategic case for a scheme, helping overcome some of the challenges around public acceptability or desire for change. The focus must be on how shared transport solutions can help transform people’s lives and protect the environment.

As Leeds City Council’s Bus Infrastructure Development Partner, WSP has helped design and deliver over £200m of shared transport solutions in Leeds, helping contribute towards the planned doubling of bus patronage over 10 years. The interventions will help remove 13.4 million car trips from the highway network and reduce the city’s carbon emissions by over 23,000 tCO2e, equivalent to planting 47,000 trees.
FIRST MILE LAST MILE (FMLM)

// CHALLENGE

For the transport network to operate effectively, not only do the major modes like trains and buses need to be planned for and invested in, but the journeys to and from these modes via their interchanges - the so called first and last miles - need to be optimised. To support this process, our clients and practitioners need to be able to account for human behaviour around transport choice and have access to a more comprehensive view of the mobility market which provides insight into emerging/future modes and services which may not yet be fully mature.

// SOLUTION

As part of our approach to transport and mobility, we have addressed this gap by layering user propensity data from Experian with national accessibility and census data, as used in more traditional transport planning analysis. This reflects an approach used by retailers to understand future customer demand and needs. By introducing this additional layer of behavioural data to inform outcome benefits, our local authority partners can now account for and assess human factors around transport choice.

// OUTCOMES

The approach has been deployed with England’s Economic Heartland (EEH), and a digital product has been built for local authorities to interrogate their data. The application of our FMLM toolkit has resulted in:

- A better understanding of the link between land use and transport;
- A greater understanding of the type of people which make up a locality;
- The ability to make comparisons between travel behaviour in different localities;
- An ability to predict a new development’s make-up based on analysis of existing places; and
- Improved understanding of which first-mile last-mile markets are likely to be most viable.
Meeting the delivery and servicing needs of businesses and residents is essential to ensure we have what we need, in the right place, at the right time and in perfect condition – but it means van and HGV trip generation and associated carbon emissions. We need to better manage freight movement – from delivery & servicing plans (DSPs) to consolidation centres, retiming delivery trials, dynamic kerbspace management and micro-distribution hubs for zero emission eCargo bike delivery operations.

Solving challenges resulting from freight movement rarely involves implementation of just one single measure. Freight consolidation, for example, can play a role in reducing total vehicle movements in an urban area but, on its own, will not be suitable to manage all freight flows. The key to improved freight management involves collecting and analysing good quality freight data, to identify issues and define the problems to be solved – only then can a package of freight management measures be delivered, working in partnership with industry operators, who are crucial in implementing changes on the ground.

Individual freight management measures can deliver efficiency, safety and environmental impact savings. For example, retiming delivery and servicing of supermarket retail stores to outside of peak periods has been shown to reduce truck fuel consumption by approximately 5%. Freight consolidation centre use, to capture sub-optimally loaded vehicles, can reduce trips by up to 80%.

Developing a comprehensive freight management strategy and a supporting action plan of measures ensures that each intervention within the package can be optimised and freight movement-related trip impacts mitigated.
// CHALLENGE

Park & Ride presents an opportunity to reduce the distances of trips to city centres and their associated carbon impact, and help air quality. Maximising potential Park & Ride facilities usage and carbon reduction requires planning and careful analysis of the demand that different locations will generate, amongst a large number of other factors.

// SOLUTION

Key to maximising the greatest reduction of vehicle kilometres is to find a popular location, which is determined by a variety of factors such as distance to destination, bus journey time, service frequency, parking costs in the city/town centre as well as Park & Ride fare. The Park & Ride tool tests these and other factors individually to determine the best combination of all factors, delivering the highest demand possible for individual locations, whilst also providing answers regarding the impact on the network directly surrounding the proposed sites.

The Park & Ride tool is unique in that it allows the testing of various factors on demand and kilometres travelled as well as site characteristics to find the best sites for decarbonisation, amongst other criteria.

// OUTCOMES

Application of the Park & Ride tool has informed the development of multiple Park & Ride sites across the UK. Evidence from the operation of those sites demonstrates the positive impact of those sites on the decarbonisation agenda. The immediate network between a site and the destination sees on average a reduction of general traffic levels by 10-15%, equivalent to school holiday traffic levels.
**STRATEGIC CARBON REVIEW**

**CHALLENGE**

Historically decarbonisation has not been front and centre of the decision-making in transport investment and services. Our current decarbonisation challenge requires urgent action across all services delivered by transport authorities to reduce carbon emissions. To identify where improvements can be made, we need to strategically appraise current carbon risks and performance of portfolios, projects and services.

**SOLUTION**

This strategic review is enabled by WSP’s Carbon Zero Appraisal Framework. We apply a proportionate process across the breadth of an authorities transport activities. Outputs of this process include a risk-based appraisal of the breadth of programmes considered, alongside quantitative appraisal to inform comparisons of key impacts.

Analysis of the programme as a whole within a structured approach that draws on WSP’s multi-disciplinary experts provides insight on the findings and recommendations for improving carbon performance, whether at a scheme level or within governance and scheme development processes.

**OUTCOMES**

A strategic carbon review can result in:

- Changing programmes to ensure the right infrastructure is invested in;
- Action to optimise the carbon performance of programmes, from major projects through to minor improvements;
- An understanding of how existing activities will influence net zero pathways;
- Upskilling of officers in their understanding of carbon impacts and its measurement, contributing to embedment of a carbon culture;
- Identified lessons learnt for future schemes.
NET ZERO ORGANISATIONAL HEALTH CHECK

// CHALLENGE

Without transport decarbonisation, Local Authorities won’t meet their Net Zero ambitions and contribute to the Governments 2050 target. Mobilising to meet this challenge, whilst continuing to address the “business as usual” issues associated with the operation of a successful transport network that supports post Covid economic recovery and long-term economic growth aspirations, inevitably requires organisational and cultural change.

// SOLUTION

Using the Government’s guidance from the Infrastructure & Projects Authority for improving Project and Programme Initiation, the WSP Transport Net Zero team was commissioned to work collaboratively with the Transport for Greater Manchester (TfGM) Leadership Team to design a bespoke Organisational Health Check and identify a route map to understand the scale and pace of organisational change required to meet this challenge. In line with the guidance the route map provides support on strategic decision-making during programme initiation. Through a series of structured exercises, it enables sponsors and those responsible for delivery to properly align complexity with the necessary capabilities and plan enhancements to ensure a more successful outcome.

// OUTCOMES

The approach provides assistance in addressing the most common capability gaps that sponsors and clients need to enhance, such as blurred governance structures, or lack of alignment between benefits and requirements. Using self-assessment through bespoke interviews, the Health Check provides a detailed gap analysis and suggests enhancement plans based on best practice from across the UK.

Building on the foundations already in place, the outcome provides a series of priority recommendations to support leadership teams understand what is required to decarbonise their transport network across all modes.
ASSET MANAGEMENT MATURITY ASSESSMENT

// CHALLENGE

The Local Government sector has for some time been under significant budgetary pressures which has been compounded by additional Covid-19 related demands and associated reductions in traditional revenue sources. This has translated to an increased challenge to maintain their diverse transport networks and ageing assets. This is compounded by these ageing assets being susceptible to damage from extreme weather events, which imposes additional burdens.

// SOLUTION

To help our clients meet this challenge we have developed an Asset Management (AM) Maturity Assessment process. We apply our two-part questionnaire (based on ISO 55000) to understand the Council’s current position and preparedness for a change. The first part completes an Authority Profile around the service, key contacts, roles and responsibilities. The second part assesses AM maturity against the seven core attributes. These attributes are based around the Plan, Do, Check, Act cycle which is the operating principle of ISO 55000. The Maturity Assessment is followed by a gap analysis with targeted measures to improve AM performance.

// OUTCOMES

Local authorities are able to understand and demonstrate the maturity of their asset management processes and systems and successfully access future funding. Our experts are able to share best practice and insight to decarbonise the network so that asset owners can value the carbon contribution of extending the life or enhancing the operational performance of their assets.
CARBON NEUTRAL MAINTENANCE PROGRAMME

// CHALLENGE
Shropshire Council led by its Climate Change Task Force identified highways as a forerunner in their climate strategy to reach carbon neutrality by 2030. They set partners the challenge of how to make the maintenance programme for their 5100km highways asset carbon neutral.

// SOLUTION
The programme aimed to identify roads in need of immediate maintenance with the objective of specifying durable, robust products to deliver enhanced performance. Working as a partnership and empowering its supply chain realised added value and benefits to the client and community at no added cost. It delivered its net zero surfacing objective by specifying a low carbon, warm mix Grouted Macadam - Milepave™ installed by a carbon neutral company Miles Macadam.

The programme achieved carbon footprint savings of up to 40% by selecting this over conventional surfacing materials. Emissions were offset through an approved scheme and a Community Tree Scheme encouraged planting of British woodland trees to sequester the equivalent total embodied CO₂.

// OUTCOMES
The programme’s initial carbon footprint was reduced through the use of engineered low carbon emission highway materials. The programme is delivered as routine maintenance has improved the safety and driving experience of road users, minimised road maintenance costs, achieved carbon footprint savings of up to 40%.

- Approx. 12% (304 tonnes) of surface course volume has been saved and sites have generated 189.1 tonnes of CO₂ to be offset (net zero), as compared to an additional 42.11 tonnes of CO₂ generated if a conventional material had been specified;
- Additional use of a certified carbon neutral organisation have saved 53.1 tonnes of CO₂, adding up to a total saving of 95.21 tonnes of CO₂;
- The programme will offset over 200 tonnes of CO₂ through community tree planting initiatives.
EV:READY – FORECASTING EV UPTAKE

// CHALLENGE

The electrification of transport and the transition from the internal combustion engine require significant infrastructure investments and changes in well-established refuelling behaviours. These challenges cut across traditionally siloed portfolios and disciplines – including energy, planning, economics, environment, sustainability, property and vehicle fleets. In each case, it is becoming increasingly important for stakeholders to understand: what future EV uptake will look like? Where and when this will occur? And what the charging infrastructure requirements will be?

// SOLUTION

WSP’s EV:Ready tool enables sophisticated EV uptake forecasting and flexible scenario testing and identification of key areas requiring charging infrastructure. It generates granular forecasts to a neighbourhood level, accounting for highly localised spatial variations in the key determinants of EV uptake rates, including:

- Consumer profiles and socio-demographics;
- Availability of off-street parking;
- Vehicle ownership, sales and turnover.

// OUTCOMES

EV:Ready has been used widely in projects across the UK, for both public and private sector clients, at site level, Local Authority level and at a Sub-Regional level, to inform EV strategy development, charging infrastructure planning, business case development and asset management investment programmes. The tool identifies areas where EV uptake is forecast to be more reliant on on-street parking, therefore in need of investment into public charging infrastructure. We have also used the tool to help estate managers understand the future requirements for EV charging amongst residents, staff or customers, including the potential revenue opportunities in the case of commercial sites.
Local Authorities are required to identify the spatial distribution of future development through their Local Plans and the implications for carbon associated with travel are emerging as a key consideration and demonstrate that alternative distributions and scale of development have been considered against one another using consistent and unbiased methodologies. Existing transport models which appear to offer the right inputs to carbon assessments are often complex and expensive to operate, inflexible and do not deal with large areas consistently.

The Spatial Carbon Impact Assessment tool provides a proportionate process to ensure alignment with carbon reduction goals. A collation of statistical processes, accessibility mapping methodologies and national datasets, it provides a mechanism to compare development distribution strategies by considering:

- Connectivity by all modes between sites and existing / new services (e.g. GPs, employment, retail and schools);
- Total annual mileage by car to access services by the ‘new’ resident population at the development locations;
- CO₂ emissions associated with the car based travel from each location.

Its application on the West of England Combined Authority Spatial Development Strategy has shown:

- An early understanding of the CO₂ footprint of the existing travel patterns in the sub-region;
- An early input to the location comparisons required in the plan making process;
- It is agile and rapidly produces comparable outputs for strategic decision making.

The logic mapping through the tool is easily understood by stakeholders.
The WSP AM Maturity Assessment has been an important factor in identifying what actions need to be taken to improve BCP’s AM systems and processes.

Lynn Waite, Highway Asset Manager, Bournemouth, Christchurch Poole (BCP) Council

The Organisational Health Check undertaken by WSP’s Net Zero experts has been crucial in helping our Senior Leadership team understand our state of readiness for the decarbonisation of the Transport network and, if we are to meet our 2038 targets, the scale and pace of change required.

Megan Black, Head of Environment, Sustainability and Logistics Transport for Greater Manchester

It was a pleasure working with the WSP team on Westminster’s 20-year freight, servicing and deliveries strategy. The finished product is comprehensive, robust, well-researched and ambitious in both scope and intent.

Westminster City Council regarding Freight, Servicing and Deliveries Strategy and Action Plan 2020-2040

WSP has managed to create an intuitive, visibly-powerful tool that can allow the EEH team and our partners to develop a quick and effective interpretation of the market potential for different FMLM travel options in a place.

Naomi Green, Head of Technical Programme, England’s Economic Heartland

It has been a pleasure and reassurance knowing that your wider team of experts are supporting the LCWIP programme.

Rabina Nawaz, Lead for DfT’s Local Cycling and Walking Infrastructure Plan

The recent carbon zero modelling and analysis was very helpful. It is important that any tool is proportionate and reflects our ability to resource in the future.

Andrew Hall, Head of Transport Policy, Leeds City Council

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