

ANNEX 1 Extract from Future of Roads Study: Ideas and suggestions put forward during officer workshop, by theme.

Decarbonising roads	Delivering mode shift	Improving connectivity and supporting growth	Conserving and enhancing the natural, historic, and built environment	Delivering a future-ready road network	Supporting road freight	Protecting and enhancing existing assets	Improving safety
							
Reducing demand for high emission vehicles	Incentivising sustainable modes	Improving management and reducing demand	Delivering sustainable infrastructure	Supporting digital connectivity	Defining a regional freight network	Improving planning and funding of maintenance	Making vehicles safer
<ul style="list-style-type: none"> Support delivery for Zero/Low Emission Zones where there is local ambition to do so 	<ul style="list-style-type: none"> Encourage Government to fully deliver East West Rail 	<ul style="list-style-type: none"> Explore measures to better coordinate traffic management, including regional traffic control 	<ul style="list-style-type: none"> Work with local authorities to develop regional best practice for green infrastructure 	<ul style="list-style-type: none"> Work with Government to realise broadband and 5G targets in the UK Digital Strategy 	<ul style="list-style-type: none"> Establish strategy and priority investments to promote freight mode shift to rail/water 	<ul style="list-style-type: none"> Develop regional asset management and climate change resilience plan 	<ul style="list-style-type: none"> Work with Government to secure incremental improvements to vehicle safety standards
<ul style="list-style-type: none"> Work with Government to identify plug-in grant replacement and address EV supply chain issues 	<ul style="list-style-type: none"> Encourage Government to provide more funding and longer-term funding certainty to encourage urban mode shift 	<ul style="list-style-type: none"> Encourage greater public-private sector data sharing to improve traffic management 	<ul style="list-style-type: none"> Prioritise retrofitting of green infrastructure on existing roads in sensitive areas 	<ul style="list-style-type: none"> Work with Satellite Applications Catapult and other STBs on Universal Digital Connectivity 	<ul style="list-style-type: none"> Identify regional consolidation centre locations to reduce road freight in urban areas 	<ul style="list-style-type: none"> Work with Government to secure more maintenance funding to build resilience 	<ul style="list-style-type: none"> Encourage incremental improvements in FORS, CLOCS and BRAKE safety standards for HGVs
	<ul style="list-style-type: none"> Encourage local authorities to 	<ul style="list-style-type: none"> Explore options to expand provision 	<ul style="list-style-type: none"> Strengthen green infrastructure 	<ul style="list-style-type: none"> Strengthen ties with 	<ul style="list-style-type: none"> Work with Government 	<ul style="list-style-type: none"> Encourage use of road/ 	<ul style="list-style-type: none"> Encourage local

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Securing low-carbon infrastructure	integrate high-quality, segregated active mode links in new road schemes	of real-time traffic information to drivers to improve reliability and resilience	requirements for new road schemes	private/public partners to stimulate online economic activity and improve online services	and local partners to support innovative alternatives for first/last mile deliveries	pavement materials that can withstand extreme weather conditions, utilising 'whole life cost' model	authorities to adopt more stringent vehicle safety standards when tendering road investment contracts
<ul style="list-style-type: none"> Work with Government to simplify planning permission for charging infrastructure 	Encourage local authorities to consider potential for bus priority in new road schemes, integrating with BSIPs	<ul style="list-style-type: none"> Investigate potential for dynamic MRN traffic management (variable speed limits/ramp metering etc) 	<ul style="list-style-type: none"> 10% biodiversity net gain target to be incorporated early in all road scheme design 	Creating digital roads	Develop a regional freight map identifying strategic freight vehicle routes and facilities	Incentivising innovation and cost reduction	Making infrastructure safer
<ul style="list-style-type: none"> Encourage Government to fund TRO amendments for on-street charging 	<ul style="list-style-type: none"> Encourage local authorities to future proof road design for other modes, and consider options for road space reallocation 	Physical measures	Working with stakeholders	<ul style="list-style-type: none"> Encourage 'digital future-proofing of road projects' 	Providing the right facilities for freight	Explore options for using new technology (including remote sensing) to collect road maintenance data	Work with partners to make better use of data to understand incident patterns on the network
<ul style="list-style-type: none"> Encourage local authorities to set clear process for charging installers 	<ul style="list-style-type: none"> Encourage local authorities to prioritise development in sustainable locations 	<ul style="list-style-type: none"> Focus road upgrades on known pinch-points, accident hotspots, and locations unlocking major development 	<ul style="list-style-type: none"> Strengthen collaboration with National Highways on environmental impact of SRN schemes 	<ul style="list-style-type: none"> Work with Government to identify standards for digital infrastructure provision in roads 	<ul style="list-style-type: none"> Identify regional requirement for additional HGV parking and associated facilities 	<ul style="list-style-type: none"> Encourage local authorities to embed Construction-Emission-Punishment (or similar) in 	<ul style="list-style-type: none"> Explore the potential for innovative design solutions for roads with poor safety

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 <ul style="list-style-type: none"> Encourage local authorities to review policy to address charging provision conflicts 	 <ul style="list-style-type: none"> Encourage local authorities to incrementally increase active mode/public transport requirements in new developments. 	 <ul style="list-style-type: none"> Prioritise low-cost, high value-for-money schemes that deliver Transport Strategy objectives (including Net Zero) 	 <ul style="list-style-type: none"> Encourage local authorities to adopt environmental stakeholder best practice in scheme design 	 <p>Promoting innovation</p>	 <ul style="list-style-type: none"> Work with National Highways and local authorities to deliver new HGV parking facilities in appropriate locations 	 <p>tenders</p> <p>Supporting research and development</p>	 <ul style="list-style-type: none"> Encourage Government to adopt vulnerable road user centric approach to design standards
<ul style="list-style-type: none"> Encourage local authorities to strengthen charging requirements at new developments 	<ul style="list-style-type: none"> Explore opportunities for greater pooling/coordination of development contributions for mode shift initiatives 	<ul style="list-style-type: none"> Work with National Highways, local authorities and the private sector to better utilise road user data in scheme appraisal 	<ul style="list-style-type: none"> Encourage local authorities to consult widely with key stakeholders/communities early in design process 	<ul style="list-style-type: none"> Strengthen ties with private sector partners to facilitate innovation 	<ul style="list-style-type: none"> Work with National Highways and local authorities to upgrade existing HGV parking facilities to standard 	<ul style="list-style-type: none"> Support technology partners in research and development of low carbon asphalt alternatives 	<ul style="list-style-type: none"> Support the development of integrated sustainable mode networks to reduce conflicts with vehicles
<ul style="list-style-type: none"> Explore potential for electric vehicle charging hubs in collaboration with private sector 	<ul style="list-style-type: none"> Work with partners to expand travel behaviour campaigns, particularly where new development comes forward 		<ul style="list-style-type: none"> Promote use of 'co-design' techniques early during scheme development 	<ul style="list-style-type: none"> Work with Government and local authorities to promote new technology trials on roads 	<p>Harnessing new technology to manage freight demand</p>	<ul style="list-style-type: none"> Work with partners to support trials of the use of recycled highways materials 	<ul style="list-style-type: none"> Work with local authorities to integrate road safety in transport planning policy
<ul style="list-style-type: none"> Encourage local authorities to 	<ul style="list-style-type: none"> Work with Government to 			<ul style="list-style-type: none"> Encourage 'real world' 	<ul style="list-style-type: none"> Work with Government 	<ul style="list-style-type: none"> Encourage highways 	<ul style="list-style-type: none"> Work with partners to

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 strengthen carbon reduction plan requirements in tenders	 deliver 'Commute Zero' programme		 Testing new approaches	 approach to trials incorporating inclusivity-related objectives	 and local authorities to promote autonomous freight/platooning trials	 authorities to build R&D into contracts for highways maintenance contracts	 develop innovative road surface treatments (high friction surfacing) to reduce incidents
<ul style="list-style-type: none"> Encourage local authorities to strengthen low carbon materials strategies for roadworks 	<ul style="list-style-type: none"> Encourage Government to strengthen developer requirements in travel plan guidance 		<ul style="list-style-type: none"> Promote research/trials of technology to reduce non-exhaust emissions from vehicles 	<ul style="list-style-type: none"> Work with National Highways on expanding its Digital Roads strategy beyond the SRN 	<ul style="list-style-type: none"> Facilitate HDV green fuel trials with Government and private sector 		<ul style="list-style-type: none"> Work with the police to develop traffic speed enforcement programmes
<ul style="list-style-type: none"> Encourage local authorities to set Net Zero as key criteria in road scheme Business Cases 	<ul style="list-style-type: none"> Work with local authorities to explore options for making travel plans more effective 		<ul style="list-style-type: none"> Work with local authorities to explore opportunities for pilot studies to improve the environment in sensitive areas 	<ul style="list-style-type: none"> Encourage a permissive environment for testing new technology, including streamlined approval processes 	<ul style="list-style-type: none"> Work with public/private sector to improve provision of real-time information to HGV drivers 		<ul style="list-style-type: none"> Work with 'THINK!' to expand road safety education programmes
<ul style="list-style-type: none"> Net Zero to be a key criterium in all 				<ul style="list-style-type: none"> Encourage local 			

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EEH project prioritisation	Managing private vehicle use			authorities to review existing facilities/ assets for use in trials			Better management of incident response
<ul style="list-style-type: none"> • Work with Government to establish MRN rapid charging fund 	<ul style="list-style-type: none"> • Support local authorities to explore incremental parking management in urban areas where there is appetite to do so 			<ul style="list-style-type: none"> • Encourage open-data policies to stimulate innovation 			<ul style="list-style-type: none"> • Work with partners to better use data to improve incident reporting
<ul style="list-style-type: none"> • Work with Government to establish legal requirement for service station operators to provide charging points 	<ul style="list-style-type: none"> • Explore solutions for parking at new developments in sustainable locations 						<ul style="list-style-type: none"> • Explore ways of making better use of data (including consolidation) to improve incident clearance times
<ul style="list-style-type: none"> • Work with Government and DNOs to secure sufficient electricity supply to support region-wide charging 	<ul style="list-style-type: none"> • Explore use modal cost tools in travel behaviour marketing campaigns to highlight costs (financial and environmental) of private car travel 						

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 <ul style="list-style-type: none"> • Work with Government and freight industry on green HDV fuel strategy 							
<p>Supporting research into new technology</p>							
<ul style="list-style-type: none"> • Facilitate 'electric road' trials with Government and private sector 							
<ul style="list-style-type: none"> • Facilitate HDV green fuel trials with Government and private sector 							