

Appendix 1: Detailed GLA/TfL response to Baseline report

Question 1: Do the nine challenges identified by the Commission cover the most pressing issues that economic infrastructure will face over the next 30 years? If not, what other challenges should the Commission consider?

We recognise the significance of the challenges identified. We welcome the focus on urban productivity and congestion as significant transport issues, as well as the inclusion of surface water management and asset resilience, given the significant impacts of climate change now and in the future. Other issues which will be important over the coming 30 years include:

- The need to renew ageing infrastructure to ensure continued reliability of existing transport networks, particularly given the impacts of climate change. Infrastructure renewals also enable enhancements, such as improved signalling systems, to provide better frequency of services, and better customer information. Ongoing renewal is best accomplished by stable, rolling programmes supported by funding certainty over the long term, but establishing such stability has been challenging in recent years;
- The consideration of decarbonisation could be expanded to consider the role of infrastructure in enabling low-carbon lifestyles enabled by mass transit that in turn unlock new, dense and carbon-efficient housing;
- The need to reduce embedded carbon in infrastructure construction will be a vital issue over the coming decades that could be supported by concentrated effort across all industries;
- Whilst rail systems are a powerful method to address congestion and improve productivity, improving bus services can offer similar benefits sooner and at lower cost, and may often be the most appropriate option in both large and small urban areas; and
- In many cases, investing in data infrastructure can unlock operational efficiencies in existing networks, and as such we would recommend that the Commission continue to emphasise the role of data investment to this end.

Question 2: What changes to funding policy help address the Commission's nine challenges and what evidence is there to support this? Your response can cover any number of the Commission's challenges.

The Commission has identified significant long-term challenges that cannot be addressed in the space of a few years. The only funding body currently with adequate resources to address challenges on this scale is the UK government, but delivery will take place through multiple organisations, many of whom are dependent on the government for some or all of their funding. Addressing these challenges will require substantial planning, design and ramping up of delivery capacity to be sustained by these organisations over years and decades. Short-term funding arrangements are not a sustainable approach to these challenges. Stable, predictable programmes of work offer much greater opportunity for standardisation and efficient planning of activity to minimise cost.

Funding certainty at the local level would be supported by fiscal devolution, giving authorities control over their own funding sources. TfL's ability to improve London's transport network over the past 20 years has been supported by its ability to borrow, which it has invested to support the renewal and improvement of transport infrastructure. Because of reduced fare income due the coronavirus pandemic, TfL now has less control over funding streams and is dependent on short-term funding settlements with central government. More fiscal autonomy for the GLA Group, including TfL, would support the ability to plan investment over the longer term and to develop more stable, sustainable plans to address the challenges identified by the Commission.

Options for strengthening London's fiscal autonomy include:

- Greater **devolution of business rates**: Returning setting of the rate to local government alongside greater retention of the tax yield would enable the system to respond flexibly to local economic priorities;
- **Tax increment financing (TIF)**: Hypothecation of future revenue streams can enable projects that otherwise could not go ahead to proceed; tax revenues that never would have been generated can be created; borrowing can support immediate investment and job creation; and there is an incentive to get schemes delivered on time so that the growth and tax starts to flow. Enterprise Zones, such as Royal Docks, are one form of TIF mechanism, and Battersea's development boom results from the TIF-backed Northern Line Extension; and
- Tax incentives to encourage the **development of undeveloped and grossly under-utilised land** and **options for land value capture**, particular where changes of land use (or approval of transport or other investment) instantly create value based on future development.

Question 3: How can better design, in line with the design principles for national infrastructure, help solve any of the Commission's nine challenges for the next Assessment and what evidence is there to support this? Your response can cover any number of the Commission's challenges.

To ensure long-term asset resilience, better design must consider climate change in the long term (in line with the Commission's 'climate' design principle). This includes:

- **Standards integration / consistency**: we need a consistent approach to design standards that can be embedded across different authorities and risk holders. For example, sectors using an agreed, consistent set of climate projection scenarios to inform standards and project design;
- **Widen the scope for resilient design**: TfL's approach to resilient design is well illustrated in its Commercial sustainable development framework.¹ The conventional project development process tends to favour conventional designs for surface water flood management. Restrictions on land take can also limit opportunities for more innovative, sustainable flood risk management measures, particularly those based on green infrastructure. As per the London Sustainable Drainage Action Plan, TfL is seeking opportunities to encourage Sustainable Drainage Systems (SuDS) as part of existing renewal and new projects. Examples include the Old Street Roundabout (green roof), and the recently completed Elspeth Road rain garden;^{2,3}
- **Infrastructure planning for drought**: little work has been conducted in the UK on understanding the infrastructure impacts and arrangements for drought that lie beyond the responsibility or capability of a water industry response. Impacts of this include an inability to operate critical regional infrastructure due to low water pressure⁴. An example of implementation can include water efficiency measures put into place in initial design. Relatedly, there is a need for a step change in water demand management. Most experts believe that the level of improvement required can only be delivered through strengthened building regulations;
- **Retrofitting**: adaptation and resilience measures can be implemented where opportunities arise for retrofitting existing infrastructure, such as was the case for the SuDS schemes outlined earlier in this answer. The UK is not well prepared for the risks posed by climate change, such as overheating, and the NIC should consider how building retrofit can be achieved most efficiently, for example though combining with other retrofit schemes or routine maintenance programmes; and

¹ TfL (n.d.) Commercial development framework: Available from the [TfL website](#).

² TfL (n.d.) Old Street roundabout and station. Accessed from the [TfL website](#).

³ TfL (n.d.) Lavender Hill. Available from the [TfL website](#).

⁴ Thames Water (2017) London severe drought scoping study. Available from the [GLA website](#).

- **Adaptation pathways approach:** good design should be applied not just to individual projects, but also to programmes of interventions. A good example of this is the Thames Estuary 2100 Plan. This uses an adaptation pathways approach to determine the suite of interventions that might be needed to address tidal flood risk and, crucially, when decisions about whether those interventions might be needed should be made.⁵ This supports the element of flexibility included in the Commission’s ‘climate’ design principle.

In London, the Mayor is promoting the development of successful, inclusive and sustainable places through his [Good Growth by Design](#) programme. This focuses on similar themes to those highlighted in the NIC’s principles, particularly noting the importance of meaningful engagement with local communities and places to achieving successful development. An important learning from the programme to date is of the significant capacity constraints that limit local authorities’ abilities to deliver good growth and the need for support programmes designed to address these.

Question 4: What interactions exist between addressing the Commission’s nine challenges for the next Assessment and the government’s target to halt biodiversity loss by 2030 and implement biodiversity net gain? Your response can cover any number of the Commission’s challenges.

Nature-based solutions use green infrastructure to address a range of environmental and societal challenges, including climate change (Challenges 5, 6). Notable examples in London include SuDS, such as green roofs and raingardens, which have been demonstrated to deliver a wide range of benefits, including supporting biodiversity.

There has been considerable work undertaken worldwide to understand the costs and benefits of nature-based solutions. Oppla and Susdrain are useful repositories of this information nationally and across the globe.^{6 7} In addition, TfL and the GLA developed guidance through [The London Strategic SuDS Pilot Study \(LSSPS\)](#).

Rapid decarbonisation (Challenges 2, 3, 4) will help reduce the long-term severity of climate change, which has long been known as a major driver of biodiversity loss across the globe, but also in the UK.⁸ Crucially, nature-based solutions are also important for decarbonisation, as set out by the Climate Change Committee.⁹ Reducing waste and moving to a circular economy (Challenge 7) will also help reduce the biodiversity impacts from pollution and resource extraction, which are major drivers of biodiversity loss within the UK and across the globe.¹⁰

By reducing the number of internal combustion engine vehicles on roads, the combination of actions to decarbonise (Challenges 2, 3, 4) and reduce congestion (Challenge 8) will help reduce the impacts of nitrogen pollution in urban areas. Nitrogen pollution has been identified as an important driver of plant biodiversity loss, which has consequences further along the food chain.¹¹

⁵ Environment Agency (2011) Thames Estuary 2100 Plan. Available from the [Environment Agency website](#).

⁶ Oppla (n.d.) Case studies. Available from the [Oppla website](#).

⁷ Susdrain (n.d.) Case studies. Available from the [Susdrain website](#).

⁸ E.g. JNCC (2010) Biodiversity and Climate Change – a summary of impacts in the UK. Available from the [JNCC website](#).

⁹ Climate Change Committee (2001) Independent Assessment of UK Climate Risk. Available from the [Climate Change Committee website](#).

¹⁰ Ellen MacArthur Foundation (n.d.) Shaping a nature-positive future with the circular economy. Available from the [Ellen MacArthur Foundation website](#).

¹¹ Plantlife (2017) We need to talk about nitrogen. Available from the [Plantlife website](#).

Question 5: What are the main opportunities in terms of governance, policy, regulation and market mechanisms that may help solve any of the Commission’s nine challenges for the Next Assessment? What are the main barriers? Your response can cover any number of the Commission’s challenges.

As outlined in the Mayor’s Transport Strategy, road pricing can also play an important role in achieving policy objectives to reduce and improve traffic flows, manage congestion, and improve air quality, and can generate funding to reinvest into safe, clean and sustainable transport. It also supports the reallocation of street space for active travel and bus priority.

Asset resilience and surface water management require clear governance, across all asset managers and risk holders (the governance landscape for surface water flooding is especially fragmented).

In light of the changes in energy systems required to reach Net Zero targets, and the scale of intervention this will entail on London’s road network, there is a key role for utility regulators to incentivise streetworks collaboration to minimise disruption to residents, and to facilitate utility companies’ planning and investing proactively to meet decarbonisation goals.

Certainty in funding, policy direction and environmental regulation that incorporates an understanding of the scale and importance of the challenge will help ensure that the uncertainties related to climate change can be better factored into decision-making.

Automation and expansion of weather-related impact data collection and more readily usable climate projections data can help to build compelling ways to present and analyse the impacts of current and future extreme weather events.

Challenge 1: The digital transformation of infrastructure – the Commission will consider how the digital transformation of infrastructure could deliver higher quality, lower cost, infrastructure services.

Question 6: In which of the Commission’s sectors (outside of digital) can digital services and technologies enabled by fixed and wireless communications networks deliver the biggest benefits and what how much would this cost?

There has been a step-change in the availability of sensors, unlocking the potential for greater analysis of assets, should organisations make investments in data infrastructure. Additionally, the availability of improved telecoms technology (small cells/5G coverage) means that this information can flow more easily from source systems back to operational analytic systems for faster optimisation of decision-making, and in some cases for new automated systems.

These complementary technologies offer multiple future opportunities and applications. To benefit from them, we recommend investment in underlying infrastructure (sensors, telecommunications, data) and importantly investment in the business strategy and business process design to make best use out of these new investments.

For example, digital services and technologies will be critical in helping to develop a coherent, comprehensive baseline of utility asset location, types and condition. They will also be crucial in helping understand the impacts of severe weather on assets and services. Once set, decisions based on analysis with climate projections data can inform efficiencies and investment.

Question 7: What barriers exist that are preventing the widescale adoption and application of these new digital services and technologies to deliver better infrastructure services? And how might they

be addressed? Your response can cover any number of the Commission's sectors outside digital (energy, water, flood resilience, waste, transport).

- **Funding:** To deliver better and more resilient infrastructure services, we need data and insight into all our assets and resources, and to be able to regularly and effectively maintain these assets to ensure they perform to standards. Currently, this data is not fully available and maintenance is incomplete due to lack of resource and funding. A crucial data gap is understanding the location and condition of underground infrastructure, a challenge that the GLA is tackling through its piloting of the National Underground Asset Register with the Geospatial Commission. Improving the monitoring and enforcement of planning policy through stronger legislative drivers and funding would enable TfL and other stakeholders to create stronger business cases for funding opportunities.
- **Disruption of systems:** TfL's infrastructure and assets are complex, running 24hrs a day. Coordination is already in place to manage upgrades and changes, but disruption needs to be minimised due to public need.
- **Lack of coverage and quality of networks:** To ensure that connected infrastructure operates to its potential, coverage and quality of services are fundamental. Gaps in coverage and quality of 5G services are a barrier, as is the lack of high capacity network capacity for processing of infrastructure services.

Challenge 2: Decarbonising electricity generation – the Commission will consider how a decarbonised, secure and flexible electricity system can be achieved by 2035 at low cost.

Question 8: What are the greatest risks to security of supply in a decarbonised power system that meets government ambition for 2035 and what solutions exist to mitigate these risks?

The Mayor supports the government ambition of decarbonising the power sector by 2035 and has gone further by setting a target for London to be net zero by 2030. The power sector will only be decarbonised by deploying more zero carbon capacity to replace fossil fuel and retiring nuclear generation. The net size of the power sector must also increase as heat and transport are electrified. Given the scale of changes, which will largely be driven by national policy, a range of actions need to be taken at local level; this must be supported by national policy and funding.

Firstly, there is the need to deploy energy efficiency (especially deep retrofit for the built environment and higher new build standards) at a greater scale and pace than is enabled under current government policy. This will reduce the net increase in electricity demand, generate green jobs and manufacturing and help alleviate the price rises faced by households and businesses.

Secondly, there is a risk of intermittent generation being difficult to manage; this can be mitigated by more active network management at the distribution level and greater use of flexible demand and storage. The electricity system will need to evolve rapidly to ensure that flexible demand is properly incentivised. This will enable proper use to be made of the considerable national investment in smart meters. Government and Ofgem policy will need to take account of the increased amount of flexibility that will be available through the increased deployment of heat networks and heat pumps, as well as providing a supportive environment for two-way EV charging.

Thirdly, it is important that electricity networks are in future planned in such a way that takes account of fast changing local needs. The GLA is supportive of the London-based DNOs' plans in this respect and looks to Ofgem to allow these elements of their Business Plans. The GLA is also supporting the development of a number of Local Area Energy Plans that should enable the benefits of local stakeholder engagement to be realised.

Challenge 3: Heat transition and energy efficiency – the Commission will identify a viable pathway for heat decarbonisation and set out recommendations for policies and funding to deliver net zero heat to all homes and businesses.

Question 9: What evidence do you have on the barriers to converting the existing gas grid to hydrogen, installing heat pumps in different types of properties, or rolling out low carbon heat networks? What are the potential solutions to these barriers?

Converting gas grid to hydrogen

None of the GLA's analysis or wider evidence to date suggests to us that hydrogen will have a major role in heating London's homes. In the great majority of cases, hydrogen should be prioritised for the most energy-intensive end uses, such as heavy industry and international shipping. Using hydrogen for low-grade heating of buildings would represent an extremely inefficient use of resources in comparison to heat pumps or heat networks.

Installing heat pumps

The primary barrier to mass installation of heat pumps is ensuring that buildings are able to retain the lower-grade heat. TfL has found that, without improving the fabric of existing buildings, then a heat pump needs to be sized based on the old and inefficient heat losses.

This in turn can lead to a need to upgrade the electrical supply to ensure there is enough power for the over-sized heat pump. This has a knock-on effect of increasing carbon emissions with the embodied carbon associated with the infrastructure of installing new cabling and larger power supplies. There is the added barrier of greatly increased power consumption, with associated costs and carbon. This problem can be mitigated by carrying out fabric improvements to existing buildings, but this has its own challenges (see Q10).

TfL have found it increasingly difficult to obtain quotes from heat pump installers that represent good value for money. From conversations with them, it is clear that increased demand for heat-pump installations is allowing them to inflate prices. This is due to the lack of people being able to carry out this specialist work. Addressing this needs a large-scale upskilling of the work force, and a means of attracting the right type of people in to receive training and carry out this work.

Low carbon heat networks

The Mayor continues to actively support the development and build out of district energy networks across London. This includes through strengthened policy in the new London Plan to encourage delivery of and connection to heat networks through new development, and through the extended Local Energy Accelerator project, which provides technical assistance to support the development of district energy projects. A clear policy, funding and market framework is needed; from regulation to protect consumers, to 'zoning' and new funding programmes that will enable the expansion, growth and decarbonisation of these networks.

Islington Council's Bunhill Heat and Power Network, developed with support from TfL and the GLA, is a strong example of the Mayor's vision for future district energy networks, exploiting available waste heat sources, in this case from the tube network, and using them to provide low carbon and affordable heat to local homes and businesses.

Question 10: What evidence do you have of the barriers and potential solutions to deploying energy efficiency in the English building stock?

The [London Environment Strategy](#) identifies some of the key barriers to deploying energy efficiency projects in the capital. A step change in the scale and pace of energy efficiency retrofit is required to meet net zero by overcoming such barriers that are both a) well evidenced over several years and b) commonly apply to both domestic and non-domestic sectors, public and privately owned. For example:

- access to funding for energy efficiency measures;
- complex building ownership (e.g. landlord/tenant split);
- type, age and condition of buildings (e.g. ~50% of London's homes are flats, and most homes have solid walls);
- lack of effective regulation and enforcement (especially in private sector housing) to drive deployment;
- logistics, accessibility, and disruption of energy efficiency works to building occupants;
- lack of capacity, knowledge and capability in organisations/individuals looking to retrofit;
- lack of access to quality independent advice on retrofit;
- planning constraints (e.g. conservation areas, listed buildings); and
- supply chain constraints - including capacity and skills within energy efficiency installers and service providers and increases in costs and delays for tech/materials.

The Mayor's programmes are helping to provide solutions to some of these barriers. For example:

- [Low Carbon Accelerator](#) programmes provide expertise to identify and develop energy efficiency projects and procure decarbonisation services;
- The Mayor's Innovation Partnership will make it easier for social landlords and UK building firms to work together to upgrade ageing homes in the capital. The scheme will link up housing providers and builders through all stages of home retrofitting, from planning through to large-scale deliver; and
- [Solar Skills London](#) - focuses on skills and training to enable Londoners to learn more about solar technologies and help to create more green jobs. Training and apprenticeships will focus on battery storage, electric vehicle charging and related smart technologies.

Planning policy is critical to improving energy efficiency in new buildings. London Plan [policy SI 2](#) requires that major developments should be net zero-carbon. Critically, this includes a requirement to monitor, verify and report on energy performance once a building is occupied. The Mayor's '[be seen' energy monitoring guidance](#) provides advice to local authorities and a template to assist building owners to implement this.

For more please contact retrofitaccelerator@london.gov.uk and matthew.thomas@london.gov.uk.

Challenge 5: Asset management and resilience – the Commission will consider how asset management can support resilience, barriers to investment, and the use of data and technology to improve the way assets are maintained.

Question 13: In what ways will current asset management practice need to improve to support better infrastructure resilience? Your response can cover any number of the Commission's sectors.

With regard to climate change adaptation and resilience, asset management will need to change substantially. One key element is maintenance, which will need to become more targeted using improved monitoring technology. It will also likely need to become more frequent as ageing infrastructure is exposed to weather events more severe than they were designed to cope with.

Given the importance of nature-based solutions to the climate crisis, maintenance activities will need to encompass management of potentially new types of green infrastructure, such as raingardens. In addition, climate change will need to be considered as part of existing green infrastructure maintenance activities (e.g. trackside green infrastructure has primarily been maintained for safety purposes alone).¹²

We noted some examples of smarter network management in our response to the NIC's call for evidence on surface water flooding; this includes using smart sensors to better manage the flows in the drainage networks to optimise and maximise capacity. When linked with accurate weather data and sustainable drainage systems, this provides the opportunity to increase the network capacity of during heavy rainfall events. Similar approaches can and are being used in the water supply network to optimise distribution and calm networks to reduce the risk of water supply pipe bursts.

In addition to modifications to the existing water infrastructure networks there will need to be upgrades to the networks to increase capacity and resilience and replace ageing mains. A longer-term approach which looks beyond the 5 year investment cycles will be needed in order to plan and deliver the required investment. The NIC should work with Ofwat and water companies to encourage a shift in approach. We understand this is the direction of travel from PR24 and beyond.

Infrastructure upgrades alone will not be sufficient to cope with increased climate risks and growing populations. Infrastructure upgrade will need to partner with modifications to how water is managed outside of the drainage and supply network through for example and as mentioned sustainable drainage, and demand management measures.

Challenge 6: Surface water management – the Commission will consider actions to maximise short-term opportunities and improve long term planning, funding and governance arrangements for surface water management, while protecting water from pollution from drainage.

The GLA has responded separately to the NIC's call for evidence on surface water management.

Challenge 7: Waste and the circular economy – the Commission will examine the role of the waste sector in enabling the move towards a more circular economy.

Question 15: What is the likely environmental impact of waste streams from construction across economic infrastructure sectors, over the next 30 years, and what are the appropriate measures for addressing it?

The environmental impacts of construction and hazardous waste streams are well understood. Addressing construction waste effectively across economic infrastructure will require adoption of a truly circular approach to management of materials in the sector. Management of construction waste should not be undertaken in isolation but should form part of infrastructure sectors applying best practice in lifecycle carbon management, as defined by the Infrastructure Carbon Review.

Challenge 8: Urban mobility and congestion – the Commission will examine how the development of at scale mass transit systems can support productivity in cities and city regions and consider the role of congestion charging and other demand management measures.

¹² Varley, J. *et al.* (2018) Valuing nature – a railway for people and wildlife: the Network Rail vegetation management review. Available from the [UK Government website](#).

Question 16: What evidence is there of the effectiveness in reducing congestion of different approaches to demand management used in cities around the world, including, but not limited to, congestion charging, and what are the different approaches used to build public consensus for such measures?

There is extensive evidence from London on the success of road user charges in achieving objectives including managing traffic and congestion (the Congestion Charge in central London); tackling air pollution (the Ultra Low Emission Zone (ULEZ) in central London, the Low Emission Zone (LEZ) London-wide, and the ULEZ expansion to inner London in October 2021).

As outlined in the Mayor's Transport Strategy, road pricing can play an important role in achieving policy objectives to reduce and improve traffic flows, manage congestion, and improve air quality, and can generate funding to reinvest into safe, clean and sustainable transport. It also supports the reallocation of street space for active travel and bus priority.

London has implemented several road pricing schemes. The legislation exists for other local authorities to also implement road pricing. We currently operate the following schemes:

- The Congestion Charge, which affects all vehicles in a 21km² area of central London, and has been in operation since February 2003. Its objective is to manage traffic and congestion;
- LEZ, which has been in operation since 2008, affects heavy vehicles (HGVs, LGVs, buses and coaches). It has operated across London since 2008, resulting in a much cleaner commercial vehicle fleet in London. Its objective is to reduce air pollutant emissions from transport; and
- ULEZ, which affects all vehicles in central London (since April 2019), and was extended to inner London in October 2021. It aims to reduce air pollutant emissions from transport.

Each scheme has successfully delivered against its main objectives and has also led to positive secondary effects such as a reduction in traffic and road casualties. To maintain the effectiveness of schemes, TfL continues to review and amend the schemes; for example tightening emissions standards required for compliance with LEZ and ULEZ.

Building road pricing into any plans for expansion of road network capacity, such as has been done for the Silvertown Tunnel, helps manage the demand for car travel and supports our Healthy Streets approach of prioritising sustainable modes.

[A recent report](#) has shown the action required to move London towards a greener future, particularly to reduce vehicle use by 27%. The report sets out that to achieve the necessary reduction in car use, London will need a new smart road user charging system implemented by the end of the decade at the latest; the Mayor has asked TfL to explore options.

Depending on their design, road user charging (including congestion charging) can deliver important secondary benefits including: air quality improvements by reducing emissions by incentivising cleaner vehicles; reducing casualties; and making streets more attractive places to walk and cycle.

Building consensus is a key challenge for sustainability implementing road user charging schemes. We have identified several approaches:

- Any proposals should address a clearly defined problem or objective. For example, there is evidence of public support for schemes which address air quality issues (e.g. the ULEZ expansion)¹³. There is also evidence of support replacing fuel duty with road pricing¹⁴;
- Ensuring thorough public consultation and using the feedback to shape the scheme;
- Explain the benefits, monitor and report on these. For example, TfL published an [annual monitoring report](#) for the first five years of the Congestion Charging scheme, and continues to publish annual information in its [Travel in London](#) reports and in regularly updated factsheets. The GLA publishes [ULEZ monitoring reports](#) showing the scheme's impact;
- Show how revenue is used. In London, revenue raised from road user charges must be invested to help deliver the Mayor's Transport Strategy;
- Putting in place appropriate complements and alternatives informed by consultation;
- Assess and mitigate impacts on protected characteristics via discounts, exemptions and sunset periods;
- Provide a range of payment channels; and
- Ensure that concerns about privacy and data protection are addressed from the start, especially for more sophisticated approaches (e.g. involving GPS and tracking units).

The GLA and TfL would be happy to discuss road user charging scheme implementation with the NIC.

Challenge 9: Interurban transport across modes – the Commission will consider relative priorities and long term investment needs, including the role of new technologies, as part of a strategic multimodal transport plan.

Question 17: What are the barriers to a decision-making framework on interurban transport that reflects a balanced approach across different transport modes?

As London's transport authority, TfL has little experience in assessing interurban transport schemes. However, there are relevant issues that should be recognised in planning and assessing:

- Interurban schemes have the potential to change travel demands within the urban areas they serve. For example, High Speed 2 will concentrate more travel demand at Euston and Old Oak Common, increasing development opportunities in these locations and increasing the need for intraurban schemes, such as Crossrail 2 and the West London Orbital, to distribute passengers. A full assessment of an interurban project should consider issues of distribution of journeys within the urban area, noting both the costs but also the very substantial wider benefits that can be unlocked through progressing such projects, and the need for partnership working with local authorities to unlock these benefits; and
- In our view, proper consideration of the distribution of journeys around an urban area is likely to reinforce the importance of prioritising interurban public transport links over road-based links. Increasing the capacity of road-based links has been shown to induce demand and is likely to lead to increased congestion in urban centres, which already tend to suffer from high congestion and air pollution.

Relatedly, there is a need to invest in the maintenance and improvement of existing highway assets, both to support essential freight journeys and to facilitate increased walking and cycling. London is currently ineligible for support from many DfT schemes that fund highways maintenance and improvement elsewhere in the country, despite handling a higher volume of traffic than most areas.

¹³ YouGov polling for Client Earth in April 2021. 51% supported the ULEZ expansion, 68% agreed that higher-polluting vehicles should pay more. Available from the [Client Earth website](#).

¹⁴ Social Market Foundation (2021) Road to Ruin. Available from the [Social Market Foundation website](#).