

UNPACKING LONDON'S FREIGHT FLOWS:

# Mapping Key Routes for Road Freight

– Executive Summary

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Information on freight flows across Greater London.

January 2025

**steer**





## Cross River Partnership

**Cross River Partnership (CRP)** is a partnership delivering environmental, economic, and community-focused projects. CRP's vision is to address sustainability challenges collaboratively in London and beyond. By supporting innovative pilots and projects, CRP creates a testbed for ideas that could improve life for those who live and work in the city.

## Smarter Greener Logistics

CRP's **Smarter Greener Logistics (SGL)** programme is a Defra-funded project led by Westminster City Council in collaboration with 23 project partners. It aims to minimise the impact of freight on noise, air quality, traffic and pavement space in London by making improvements across 14 London boroughs and two London Business Improvement Districts (BIDs).

## Purpose of this Report

CRP has commissioned **Steer** to produce this report, consolidating a range of datasets and evidence regarding freight movements across Greater London in response to 17 key research questions.



## London Freight Data

This study draws from analysis of Transport for London's (TfL's) London Highways Assignment Model (LoHAM) as well as Department for Transport (DfT) Road Freight Statistics, Traffic Counts, and Van Statistics, as well as primary data collected via three corridor surveys.

This report uses LoHAM's 2026 hybrid model. It is also important to note that the LoHAM model was obtained under licence, with analysis and interpretation carried out by Steer, rather than TfL conducting the work directly.

## Freight and Logistics in London

**Freight and logistics are essential** to the smooth running of London, playing a critical role in ensuring that residents and businesses have access to the goods and materials they need.

From supporting construction projects to delivering parcels directly to doorsteps, the sector underpins the city's economy and daily life.

**London is a net importer of freight**, with the majority entering the city via road or port. Freight travels by rail, maritime routes (through the Port of London and, in smaller volumes, upriver), and primarily by road. Across the UK, around 90% of freight is moved by road, using both heavy and light goods vehicles.

Significant progress has been made in the freight sector to **address challenges** such as air quality, noise, and safety. Industry initiatives, technological advancements, and **collaborative efforts** have already contributed to more efficient and sustainable logistics. By continuing to build on these successes, the sector can further support London's needs while **balancing environmental and social considerations**.



# Recommended Actions

The following actions are critical for transforming the freight sector in London and they must be addressed urgently through collective action and strategic collaboration. They are designed to be ambitious, achievable, and collaborative, with specific roles for each stakeholder involved:

1.

## 1. Reduce Carbon Emissions from Freight

- **Key Stakeholders:** Transport for London (TfL), Network Rail, Thames and London Waterways Forum, Port of London Authority (PLA), Canal and River Trust, Thames Estuary Growth Board, London Boroughs (local authorities), LoCITY

## 2. Manage Freight's Contribution to Congestion

- **Key Stakeholders:** Business Improvement Districts (BIDs), Kerbside management product providers, Logistics operators, Transport for London (TfL), Transport for London Road Network (TLRN), London Boroughs (local authorities)

## 3. Support Industry Best-Practice

- **Key Stakeholders:** Transport for London (TfL), Construction Logistics and Community Safety (CLOCS), Boroughs (local authorities), Fleet Operator Recognition Scheme (FORS)

## 3. Enable Clean and Efficient Freight

- **Key Stakeholders:** London Boroughs (planning and transport planning/strategy teams), Developers and landowners, Estate management companies, Logistics companies/technology providers, Transport for London (TfL), Business Improvement Districts (BIDs), Greater London Authority (GLA), Department for Transport (DfT), Couriers/freight operators, Transport Planning Society (TPS), Chartered Institute of Logistics and Transport (CILT)

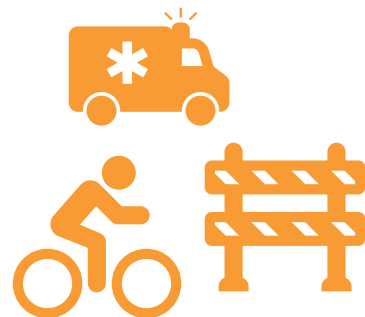


## Vehicle Distances



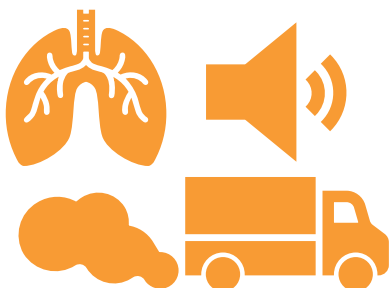
- **Around 190,000 km** travelled by HGVs
- **Around 112,00 km** assigned to LGVs primarily used for the delivery/collection of goods

## Casualties



- **Around 1,400** casualties associated with freight movements
- Average value of prevention per casualty is around **£124,000**
- Traffic collisions cost a total of **£176 million** annually

## Pollution and Health



- **£53 million** in air pollution-related costs attributed to freight movements
- **£71 million** in noise pollution-related costs attributed to freight movements

## Congestion



- **£500 million** of costs related to congestion attributed to freight vehicles
- **£539 million** in costs to the freight industry due to congestion

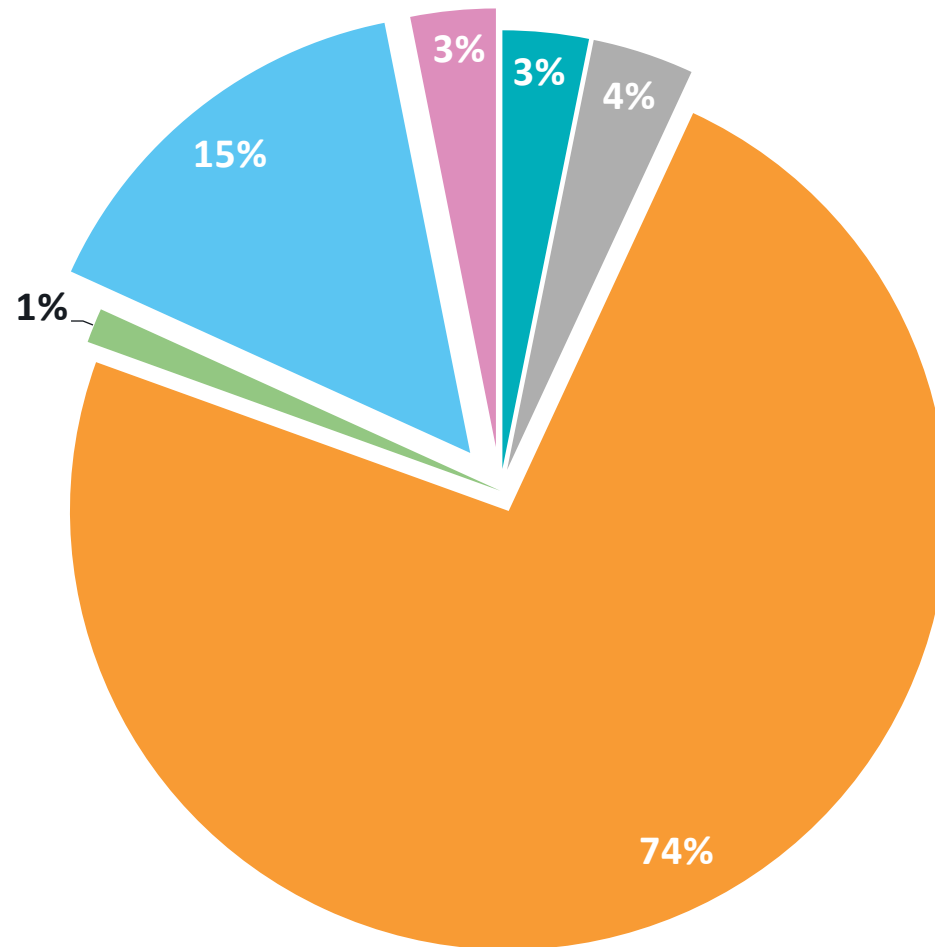
# Freight in London

## LGVs are the most common commercial vehicle on London's roads

The majority of commercial vehicles on the network are LGVs. **DfT traffic count data** shows that **LGVs make up 15% of vehicles** counted, **five times more than HGVs**. However, DfT's Van statistics suggest that most of these would be service vehicles rather than those directly attributed to making deliveries/collections.

**DfT's Van Survey** shows there were **205,207 vans in London** from 2019 to 2020. 62% of these vehicles were kept by businesses, and 38% were held privately. However, 75% of LGV vehicle miles in London were made by vehicles kept by businesses. SMMT (Society of Motor Manufacturers and Traders) data suggests that there were around 225,000 vans registered in London by the end of 2022.

The distribution of these total counts is unevenly dispersed. LGVs constitute upward of 20% of traffic on a large proportion of the major road network. Other than on the M25, HGVs do not make up more than 10% of total traffic on any road in Greater London. However, on many routes, they constitute a higher number than the total 3%.



- Cycles
- Cars and Taxis
- LGVs
- Two-wheeled Motor Vehicles
- Buses and coaches
- HGVs

LGVs make up 15% of traffic

205,207 LGVs/  
vans in  
London  
between 2019  
and 2020

75% of LGV  
mileage is for  
business  
purposes

Figure 1: DfT traffic counts of all vehicles aggregated across all count sites in Greater London

# Overview of Some Major Stakeholders Across Freight Sectors in Greater London

3.1

Stakeholders

## Courier, Express, and Parcels



- Amazon
- DHL
- DPD
- EVRi
- Royal Mail
- TNT Express (FedEx)
- UK Mail (DHL)
- UPS
- Yodel

## Food and Drink



- Bid Food
- Brakes
- Brewery Logistics Group
- Ocado
- Tesco Distribution
- Wincanton

## Construction Materials and Equipment



- Barratt
- British Land
- Canary Wharf Group
- Cemex
- Day Aggregates
- Galliard
- Hanson
- London Aggregates - Working Party
- Peabody
- Tarmac
- Thames Tideway

## Waste



- Biffa
- Suez
- Veolia
- Viridor

## Generators of freight into London

London is a net importer of freight, requiring more movement of goods into the city than it generates outgoing freight trips. While LGV and HGV trip generation are complex and dispersed, **three key sources of freight movements** stand out: **Heathrow Airport**, the **Port of London**, and **warehousing land to the northwest of London** entering via the major road network.

The adjacent map shows the network of major ports and corridors carrying goods throughout the UK. **Most UK freight passes through these ports (75%)**, meaning that **London's freight flows are shaped by its connections to these on a broader scale**. The wider Port of London is the UK's largest port handling 12% of all tonnage (DfT port statistics, 2022). The A13, running parallel to the Thames, is the main corridor serving these terminals.

London's freight flows are also shaped by its connection to one of the UK's **major warehousing and industrial areas**, 'the golden triangle', in the Midlands. This means that corridors entering London from the north-west (the A40, M4, and M1) are some of the busiest with freight vehicles.

These major **flows entering the city** are likely to have a **higher prevalence of HGVs than LGVs** due to the types of goods being transported - bulk groupage on its middle mile between distribution centres entering via Heathrow and the Midlands, as well as construction materials which arrive via the Port of London.

Using Transport for London's (TfL) London Highway Assignment Model (LoHAM), Steer produced maps showing the origins and destinations of LGV and HGV trips within London for this report. They have also used DfT Road Freight Statistics to map key flows and routes between London's regions (International Territorial Level 2).



Figure 2: UK Major Ports Group Strategic Freight Network Map

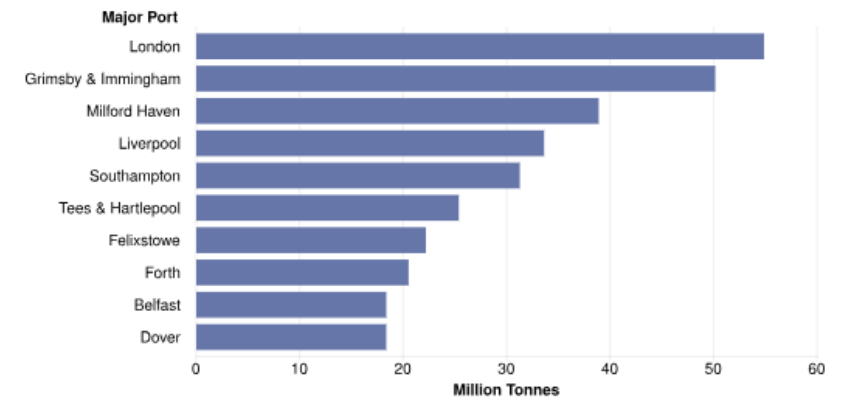


Figure 3: Top 10 major ports by tonnage 2022 (DfT)



## Freight flows within London

Figure 4 shows key HGV routes across Greater London, with heavy flows on the northern inner ring road, the A13 in the east, and the A40 and routes to Heathrow in the west. In contrast, Figure 5 shows that LGVs follow a much denser network, with significant movements on less arterial roads and key corridors like the A40, A13, A2, and M4. Unlike HGVs, LGVs are used for a wider range of purposes, including freight and servicing activities, and are often stored at smaller business premises or residential properties. This informality in storage, coupled with the lack of granular data distinguishing personal from business use, complicates understanding their movements. LGV patterns frequently resemble private car usage, with more complex patterns due to frequent deliveries to residential addresses and businesses citywide.



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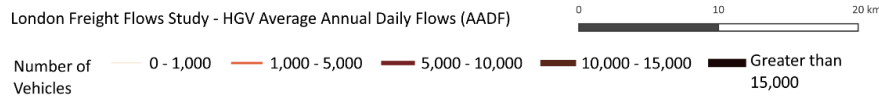


Figure 4: London HGV flows (DfT Annual Average Daily Flows – AADF)



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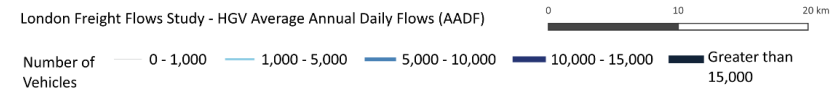


Figure 5: LGV Average Annual Daily Flows (AADF) - DfT

# Recommended Actions

The following actions are critical for transforming the freight sector in London and they must be addressed urgently through collective action and strategic collaboration. They are designed to be ambitious, achievable, and collaborative, with specific roles for each stakeholder involved:

## 1. Reduce Carbon Emissions from Freight

- **Key Stakeholders:** Transport for London (TfL), Network Rail, Thames and London Waterways Forum, Port of London Authority (PLA), Canal and River Trust, Thames Estuary Growth Board, London Boroughs (local authorities), LoCITY

## 2. Manage Freight's Contribution to Congestion

- **Key Stakeholders:** Business Improvement Districts (BIDs), Kerbside management product providers, Logistics operators, Transport for London (TfL), Transport for London Road Network (TLRN), London Boroughs (local authorities)

## 3. Support Industry Best-Practice

- **Key Stakeholders:** Transport for London (TfL), Construction Logistics and Community Safety (CLOCS), Boroughs (local authorities), Fleet Operator Recognition Scheme (FORS)

## 3. Enable Clean and Efficient Freight

- **Key Stakeholders:** London Boroughs (planning and transport planning/strategy teams), Developers and landowners, Estate management companies, Logistics companies/technology providers, Transport for London (TfL), Business Improvement Districts (BIDs), Greater London Authority (GLA), Department for Transport (DfT), Couriers/freight operators, Transport Planning Society (TPS), Chartered Institute of Logistics and Transport (CILT)



5. Recommended Actions

# Reduce Carbon Emissions from Freight

	Action	Aim	Next steps to implement the action	Delivery partners	Timescale
5. Recommended Actions	<p><b>1</b></p> <p><b>Explore opportunities for increased intermodal flows</b> (more goods transported by rail or water in addition to road for a significant part of the journey)</p>	Support mode shift from road to cleaner alternatives	<ul style="list-style-type: none"> <li>Understand current barriers to increased use of rail and water for freight flows in London.</li> <li>Understand the capacity and capability of current infrastructure (i.e., at rail-connected land and wharves) for transporting and handling rail and waterborne freight.</li> </ul>	<ul style="list-style-type: none"> <li>CRP</li> <li>TfL</li> <li>Network Rail</li> <li>Thames and London Waterways Forum</li> <li>PLA</li> <li>Canal and River Trust</li> <li>Thames Estuary Growth Board</li> </ul>	The next steps can be delivered in the <b>short-term</b> for medium- and longer-term action
	<p><b>2</b></p> <p><b>Support an accelerated transition of London’s van fleet to electric vehicles, particularly for servicing</b></p>	Support use of zero emissions modes	<ul style="list-style-type: none"> <li>Work with boroughs to understand the on-street provision of electric chargers for vans and how this relates to areas with higher-intensity servicing activity.</li> <li>Work with boroughs, TfL and LoCITY to identify priority areas for further on-street provision of rapid chargers for vans.</li> <li>Work with boroughs and the GLA to prioritise the use of electric fleet vehicles through procurement policies and practices.</li> </ul>	<ul style="list-style-type: none"> <li>Boroughs</li> <li>TfL</li> <li>LoCITY</li> </ul>	The next steps can be delivered in the <b>short-term</b> for medium- and longer-term action
	<p><b>3</b></p> <p><b>Reduce the need for vans to be driven as part of servicing activity</b></p>	Support use of zero emissions modes	<ul style="list-style-type: none"> <li>Work with boroughs to include planning conditions that require the provision of lockers at construction sites (for storing tools).</li> <li>Work with boroughs to include planning conditions that require space for cargo bikes to be provided as part of new developments (to support using cargo bikes for servicing).</li> </ul>	<ul style="list-style-type: none"> <li>Boroughs</li> <li>TfL</li> </ul>	The next steps can be delivered in the <b>short-term</b> for medium- and longer-term action

Key for timescales: Immediate = 0-3 months; Short-term = 3 months – 1 year; Medium term = 1-2 years; Longer term = 2 years+

# Manage Freight's Contribution to Congestion

5.

Recommended Actions

	Action	Aim	Next steps to implement the action	Delivery partners	Timescale
1	<b>Support the use of new technology to enable smarter use of the kerbside</b>	Make smarter use of existing capacity to manage freight's contribution and exposure to congestion	<ul style="list-style-type: none"> <li>Collate evidence and case studies about using new and emerging kerbside management practices and disseminate them to the boroughs.</li> <li>Continue work with kerbside management product providers to support further trials in priority locations in London.</li> <li>Make use of learnings from trials to focus kerbside management trials and rollout in locations with high chance of take-up by operators.</li> </ul>	<ul style="list-style-type: none"> <li>CRP</li> <li>Boroughs</li> <li>Business Improvement Districts (BIDs)</li> <li>Kerbside management product providers</li> <li>Logistics operators</li> <li>TfL</li> </ul>	<ol style="list-style-type: none"> <li>Short-term</li> <li>Ongoing</li> </ol>
2	<b>Reduce "empty running" through development control</b>	Make better use of existing capacity to reduce the number of trips vehicles have to make	<ul style="list-style-type: none"> <li>Work with boroughs and TfL to identify appropriate mechanisms for requiring construction, then deliveries and servicing trips associated with new developments to improve vehicle utilisation (e.g., for most trips, making a delivery to include uplift, too).</li> </ul>	<ul style="list-style-type: none"> <li>Boroughs</li> <li>TfL</li> </ul>	Short-term
3	<b>Design and implement a public awareness campaign to encourage people to choose more sustainable delivery options</b>	Reduce the volume of delivery trips associated with making personal deliveries	<ul style="list-style-type: none"> <li>Define the target audience/trial area for the campaign.</li> <li>Design a campaign with a marketing and communications agency.</li> <li>Evaluate the outcomes of the trial.</li> </ul>	<ul style="list-style-type: none"> <li>CRP</li> <li>Potentially boroughs (behaviour change teams)</li> <li>TfL</li> </ul>	The design element and trial can be delivered in the <b>short term</b> , and the evaluation in the <b>medium term</b> .

Key for timescales: Immediate = 0-3 months; Short-term = 3 months – 1 year; Medium term = 1-2 years; Longer term = 2 years+

## Support Industry Best-Practice

	Action	Aim	Next steps to implement the action	Delivery partners	Timescale
5. Recommended Actions	1 <b>Support the creation and development of a London-wide or Central London-focused group to support action to improve the impact of construction logistics activity</b>	To explore the full range of opportunities there are to make construction logistics activity in London cleaner and safer	<ul style="list-style-type: none"> <li>Work with TfL and previous members of the TfL-organised 'Construction Logistics Improvement Group' to understand the opportunities for a new group and the issues and opportunities that it should focus on.</li> <li>This could also be achieved by placing more emphasis on construction at sessions of existing freight groups e.g. TfL Freight Forum and Central London Freight Quality Partnership.</li> </ul>	<ul style="list-style-type: none"> <li>CRP</li> <li>TfL</li> <li>Construction Logistics and Community Safety (CLOCS)</li> <li>Boroughs</li> </ul>	<b>Immediate</b>
	2 <b>Support the development of emissions and safety standards for LGVs by sole traders/SMEs beyond the legal minimum</b>	To improve the environmental and safety performance across London's LGV fleet	<ul style="list-style-type: none"> <li>Work with TfL to understand how Fleet Operator Recognition Scheme (FORS) can support smaller van operators, including sole traders and SMEs, in improving their environmental and safety performance. (<i>Note: 'FORS Assured' is pending final clearance</i>)</li> </ul>	<ul style="list-style-type: none"> <li>TfL</li> <li>FORS</li> </ul>	<b>Immediate</b>
	3 <b>Further investigate the presence of high volumes of HGVs and LGVs on less appropriate routes, cross-checking this with provision of infrastructure for vulnerable road users</b>	To reduce the potential for conflict between vulnerable road users and HGVs and LGVs	<ul style="list-style-type: none"> <li>Conduct further data analysis to identify locations in London where there is a conflict or potential conflict between vulnerable road users, HGVs, and LGVs.</li> <li>Investigate the borough's intervention plans at locations with a high potential for conflict.</li> </ul>	<ul style="list-style-type: none"> <li>Boroughs</li> <li>TfL</li> </ul>	<b>1. Immediate</b> <b>2. Short-term</b>

Key for timescales: Immediate = 0-3 months; Short-term = 3 months – 1 year; Medium term = 1-2 years; Longer term = 2 years+

# Enable Clean and Efficient Freight

	Action	Aim	Next steps to implement the action	Delivery partners	Timescale
5. Recommended Actions	1 <b>Develop a guide for local authorities to support them to secure more land for logistics/distribution</b>	To support local authorities in increasing the supply of logistics land, to enable efficient freight operations	<ul style="list-style-type: none"> <li>Identify the different types of ways in which logistics land can be provided and a range of suitable case studies for each.</li> <li>Develop the guide and promote it to local authorities.</li> </ul>	<ul style="list-style-type: none"> <li>CRP</li> <li>Boroughs (planning and transport planning/strategy teams)</li> <li>Developers and landowners</li> <li>Estate management companies</li> </ul>	<ol style="list-style-type: none"> <li><b>Immediate</b></li> <li><b>Short-term</b></li> </ol>
	2 <b>Explore potential applications and the impact of new technology in the sustainable logistics sector</b>	To explore how new technology can be applied to improve the sustainability and efficiency of freight	<ul style="list-style-type: none"> <li>Identify the new technologies of interest and potential trial partners, e.g., the use of AI by logistics companies to optimise routes.</li> <li>Explore how CRP could support a trial with the identified potential partners.</li> </ul>	<ul style="list-style-type: none"> <li>CRP</li> <li>Logistics companies/technology providers</li> <li>Boroughs</li> <li>TfL</li> <li>BIDs</li> <li>Developers and landowners</li> <li>Estate management companies</li> </ul>	<ol style="list-style-type: none"> <li><b>Immediate</b></li> <li><b>Short-term</b></li> </ol>
	3 <b>Understand the impact and effectiveness of the policies in the London Plan to support the provision of logistics land</b>	To understand potential future action by CRP to support increasing the supply of logistics land	<ul style="list-style-type: none"> <li>Discuss with GLA the ongoing implementation of Policy E4 Land for industry, logistics, and services to support London's economic function and Policy E7 Industrial intensification, co-location, and substitution and the success/challenges thereof.</li> <li>Identify ways CRP could support future action to increase the supply of logistics land in London.</li> </ul>	<ul style="list-style-type: none"> <li>Greater London Authority</li> <li>CRP</li> </ul>	<ol style="list-style-type: none"> <li><b>Immediate</b></li> <li><b>Short-term</b></li> </ol>

Key for timescales: Immediate = 0-3 months; Short-term = 3 months – 1 year; Medium term = 1-2 years; Longer term = 2 years+

# Enable Clean and Efficient Freight

	Action	Aim	Next steps to implement the action	Delivery partners	Timescale
4	<b>Improve access to data to support decision-making and planning for freight</b>	To improve the availability and access to data to support effective planning for freight	<ul style="list-style-type: none"> <li>• Work with TfL and DfT to explore opportunities for improving access to freight-related data, while acknowledging technical, procurement, and legal considerations.</li> <li>• Explore the possibility of CRP utilising operational data from one or two couriers/freight operators with whom it has strong relationships, to support further research and planning for freight.</li> <li>• Support discussions around the development of a London-wide freight data portal, working with TfL and other parties to assess feasibility, costs, and potential collaborations, with an emphasis on long-term feasibility.</li> <li>• Explore the potential for more detailed freight data collection at the London level with TfL and DfT, aligning with any current developments (e.g. National Freight Model and other projects)</li> <li>• Explore opportunities for TfL’s MoTiON and LoHAM models with a focus on enhancing freight data inputs collaboratively</li> </ul>	<ul style="list-style-type: none"> <li>• TfL</li> <li>• Department for Transport</li> <li>• Couriers/freight operators</li> <li>• CRP</li> </ul>	<b>Medium term</b>
5	<b>Explore with TfL and the boroughs the value of CRP developing, or co-developing “freight awareness” training to support better planning for freight</b>	To support better planning for freight	<ul style="list-style-type: none"> <li>• Discuss with TfL and relevant groups the appetite for developing training and who should develop it if there is sufficient interest/need.</li> <li>• Conduct a training needs assessment to identify what training should be included and the format for its delivery.</li> </ul>	<ul style="list-style-type: none"> <li>• CRP</li> <li>• TfL</li> <li>• Boroughs</li> <li>• Potentially Transport Planning Society (TPS)</li> <li>• or Chartered Institute of Logistics and Transport (CILT)</li> </ul>	<ol style="list-style-type: none"> <li>1. <b>Short-term</b></li> <li>2. <b>Short-term</b></li> </ol>

Key for timescales: Immediate = 0-3 months; Short-term = 3 months – 1 year; Medium term = 1-2 years; Longer term = 2 years+

# Collaboration and CRP's Consultancy Services

Moving forward, [Cross River Partnership](#) (CRP) will continue to champion the identified actions, ensuring that they are ambitious, and that progress is made quickly.

Success in **implementing these actions relies on a collaborative approach**. To avoid working in silos, all relevant stakeholders – whether they are local authorities, businesses, transport providers, or technology developers – must collaborate and actively engage in the process. **CRP is uniquely positioned to facilitate this collaboration** by acting as a **central coordinator** and **trusted partner**, helping to create synergies across the different sectors.

By working together, stakeholders can share resources, align objectives, and track progress more effectively. CRP will play a critical role in ensuring that **actions are coordinated**, **timelines are met**, and that **lessons are shared** across the network to ensure long-term success.

For more information or to engage with **CRP's consultancy services** on e.g. freight and logistics solutions, please **contact us**. CRP offers expert advice, project coordination, and partnership-building services to help businesses and local authorities achieve their sustainability and logistics goals. Together, we can create a cleaner, more efficient, and more sustainable freight system for London.



1  
Decarbonisation & Sustainability



2  
Placemaking & Greening



3  
Strategy Planning



4  
Monitoring & Data Analysis



5  
Partnership & Stakeholder Engagement



## Contact Information

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If you would like further information about anything that has been included in this report, please get in touch:



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You can read the full report, which was produced as part of Cross River Partnership's Defra-funded Smarter Greener Logistics programme, [here](#).