

Roads Task Force – Technical Note 3

Freight, servicing and logistics in London – what are the key industry trends?

Introduction

This paper forms one of a series of thematic Notes, produced to contribute to the Roads Task Force Evidence Base. The London Freight Data Report (2012) produced by the University of Westminster for TfL provides a comprehensive digest of freight 'industry' statistics for London. This paper presents a summary of key facts and trends from this paper.

Summary

- Road freight accounts for 89 per cent of all freight lifted in London. Freight accounts for 16 per cent of motorised London traffic by vehicle – closer to 20 per cent in terms of share of road capacity used (they are larger vehicles).
- Projections suggest that the demand for freight movement in London will increase over the medium to long term. The trend over the last 20 years has varied and the recent recession has seen volumes of freight lifted fall from historic highs to levels comparable with the early 1990s.
- Freight vehicle-kilometres have followed the trend for freight lifted, although this is a net effect of many factors including population/economic growth, increased efficiency with the utilisation of larger HGVs, and some 'substitution' of HGVs with vans.
- Freight/servicing is an important employer in London, and is the 'main activity' of 5 per cent of London's workforce.
- The freight industry in London has followed wider industry trends, with increasing consolidation and decentralisation of activities to locations with good access to the motorway network.
- Van and lorry activity on the road network follows a distinct pattern, with a pronounced early morning peak and a progressive reduction in activity as the day progresses.
- A range of TfL/GLA policies affecting freight have been put in place over recent years, to address wider Mayor's Transport Strategy priorities. Notable of these have been the London Low Emission Zone, Congestion Charging, various road safety initiatives and a successful programme of Travel Demand Management and advice in relation to the London 2012 Olympic and Paralympic Games.

Basics – freight, servicing and logistics in London

- The development of London requires efficient movement of goods and services. Policies outlined in the London Plan will have the effect of increasing the volumes of freight needing to be moved over the medium to long term.

- In 2011, goods vehicles (vans and lorries combined) accounted for 16 per cent of motorised vehicle kilometres travelled on London's roads. As these are typically larger vehicles, their proportionate use of available road space (network capacity) is higher – 20 per cent or more.
- Road is by far the dominant mode for goods transport in London in terms of weight of goods lifted (89.3 per cent). Just 5.3 per cent of freight lifted in London goes by river, with 4.3 per cent by rail and 1.1 per cent by air. These proportions have remained relatively stable over recent years.
- In 2010, 215,000 people (5 per cent of the London workforce) were directly employed in organisations whose main activity involves freight transport and logistics. There were estimated to be 30,000 transport and logistics workplaces in London in 2011. About 70 per cent of these workplaces were wholesaling establishments, and 85 per cent of them employed fewer than 10 people.
- There have been recent trends of a decentralisation of warehousing from London to the surrounding area, together with consolidation – reflected in increased average size of warehouse.

Freight trends and their relationship to the economy

The following statistics relate only to freight carried in heavier vehicles – those above 3.5 tonnes gross vehicle weight. They therefore exclude most vans.

Figure 1 shows the trend for road freight lifted in London over the past two decades (in terms of tonnes). The trend since mid early 1990s was one of steady growth until about 2006, when tonnage fell sharply, reflecting the latest recession.

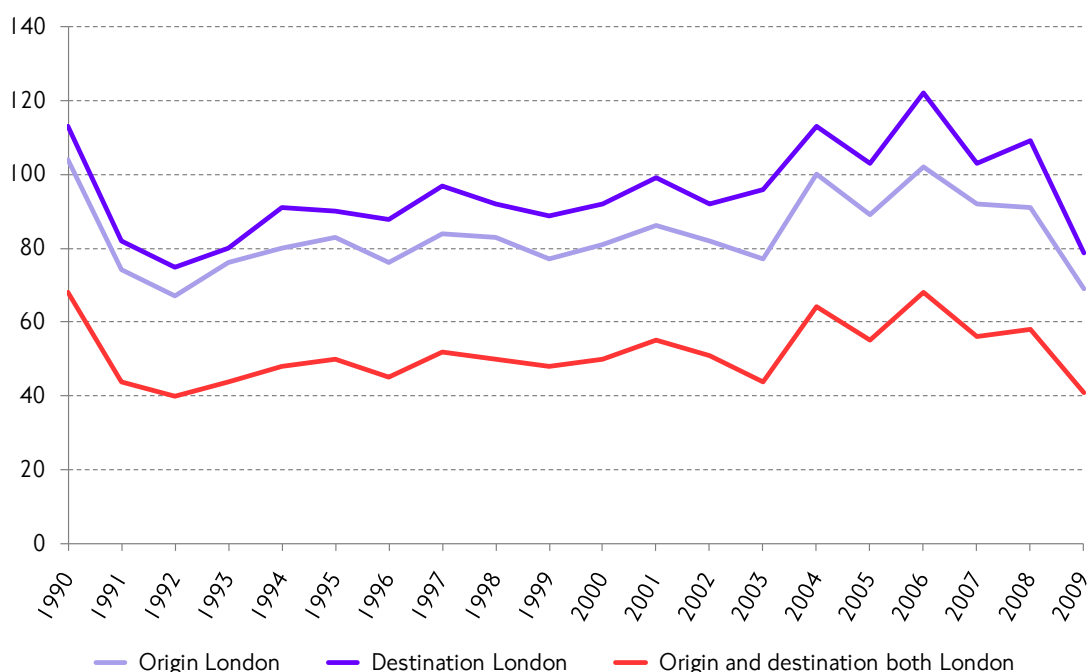
- 132 million tonnes of road freight were lifted (having an origin or destination within) London in 2010 – about 9 per cent of the total UK tonnage. Of this total, 44 million tonnes had both an origin and destination in London.
- London is a net 'importer' of freight, with 53 million tonnes entering London from outside, against 35 million tonnes lifted in London with destinations elsewhere. Of this 35 million tonnes, 79 per cent is destined to either the East of England or South East UK regions.
- London freight (lorry) journeys are split almost equally between articulated and rigid vehicles – 51 and 49 per cent respectively. 31 per cent of freight kilometres in London were run empty – compared to 29 per cent at the national scale. The 'Loading factor' (average percentage load) for HGV journeys in London is 59 per cent – the same as the UK average.

Figure 2 shows the relationship between Gross Value Added (GVA) and freight traffic (vehicle-kilometres) over the past 16 years by light and heavy goods vehicles.

- HGV (>3.5 tonnes) kilometres grew during the late 1990s, were broadly stable during the first part of the last decade, but have declined in more recent years to stand (in 2010) at a similar level to those of 1994.
- Van kilometres (<3.5 tonnes) grew more consistently and more closely tracked GVA up to 2007, when they stood 32 per cent above 1994 levels. However, they also fell more dramatically during the recent recession, in 2010 standing just over 16 per cent above 1994 levels.

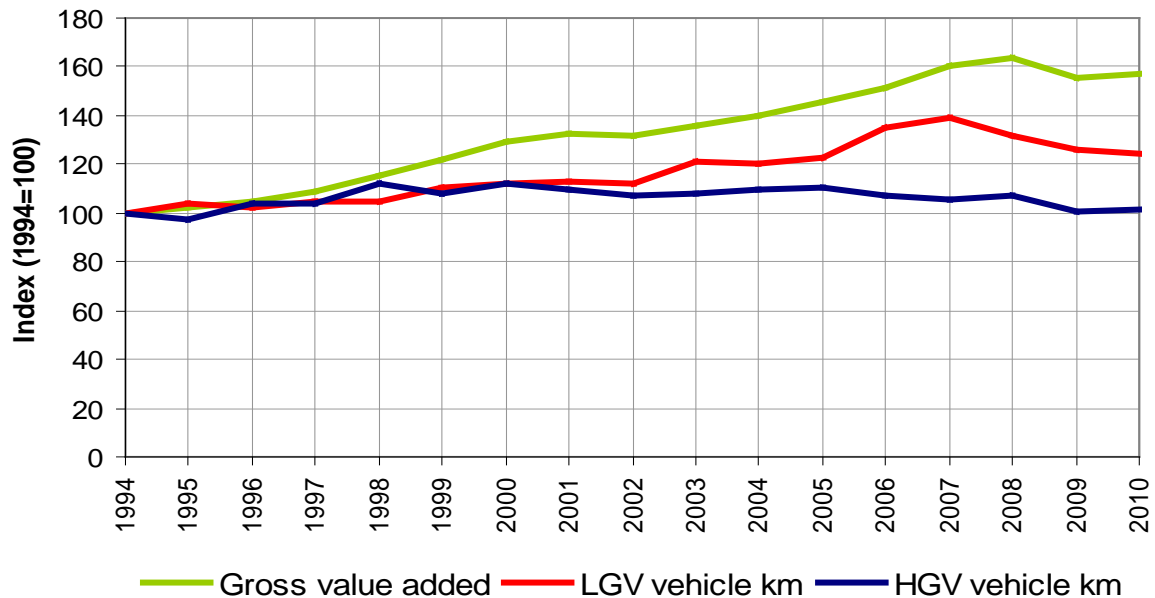
So, for tonnage and vehicle-kilometres it is possible to see a clear link to economic trends. However, the trends also suggest a progressive ‘substitution’ of heavier lorries by vans.

Figure 1 London road freight lifted. Tonnages by origin/destination.



- In 2010 4.8 billion kilometres were driven on London’s roads. 79 per cent of these kilometres were driven by light goods vehicles (up to 3.5 tonnes), 15 per cent by rigid goods vehicles, and the remaining 5 per cent by articulated goods vehicles.
- LGVs and HGVs were responsible for 13 per cent and 3 per cent respectively of the vehicle kilometres travelled by all motorised road vehicles in London in 2010. The data is based on vehicle movements. If it were based on Passenger Car Units (PCUs) – a measure of the road capacity taken up by different types of vehicle, then HGVs would approximately double in importance in terms of their use of road capacity (c. 6 per cent).
- LGVs are estimated to perform 57 per cent of their total distance on major roads, and 43 per cent on minor roads.

Figure 2 London road freight lifted. Relationship of HGV and LGV kilometres operated to GVA growth.



Road freight and Mayoral Transport Strategy priorities

Road Safety

- LGVs were responsible for 13 per cent of the total motorised vehicle kilometres in London in 2010, and were involved in collisions that resulted in 10 per cent of London's road traffic casualties. These collisions resulted in 6 per cent of London's total road traffic fatalities. However, the casualty rate for LGVs has more than halved since 1993.
- HGVs were responsible for 3 per cent of the total motorised vehicle kilometres in London in 2010, and were involved in collisions that resulted in 3 per cent of London's road traffic casualties. These collisions resulted in 16 per cent of London's total road traffic fatalities. Although tending therefore to be disproportionately involved in the more serious collisions, the casualty rate for HGVs has also more than halved since 1993.
- Particular contemporary concern surrounds the increase in cyclist casualties involved in collisions with HGVs.

Emissions and air quality

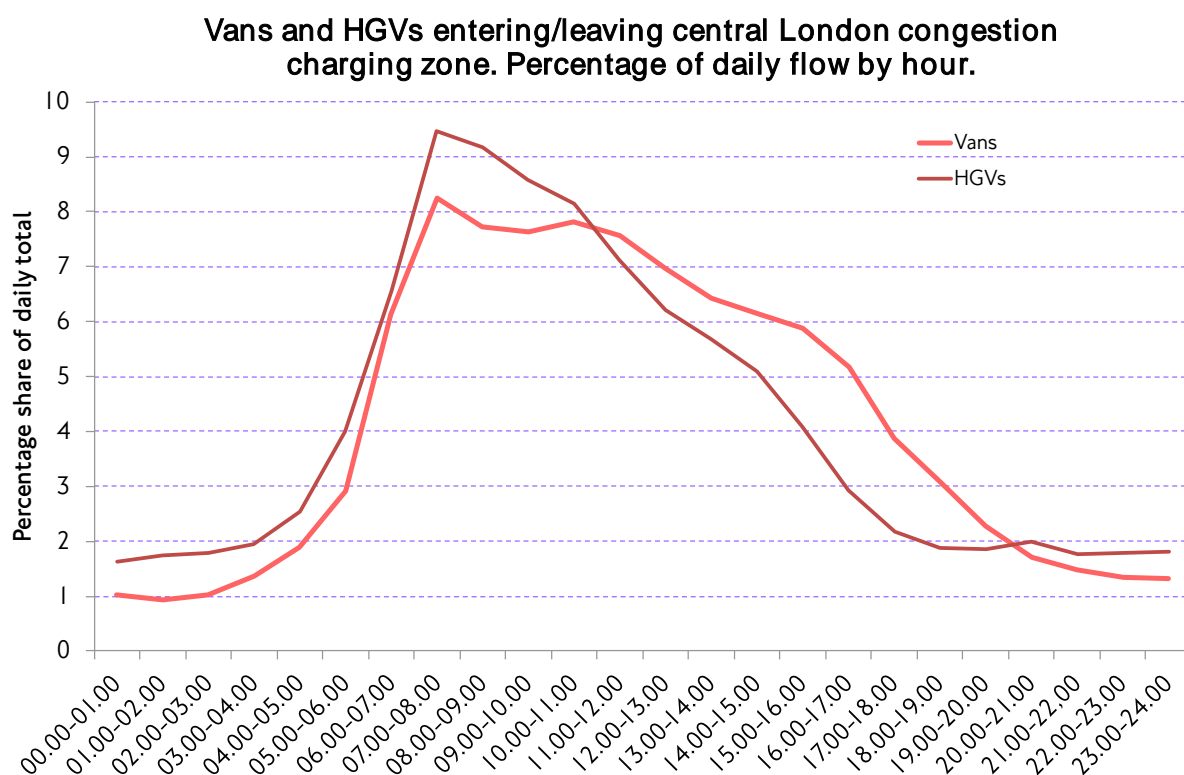
- Road freight transport was estimated to be responsible for 22 per cent of road transport carbon dioxide (CO₂) emissions in London in 2010 – 12 per cent by HGVs and 10 per cent by LGVs.

- Road freight transport was estimated to be responsible for 36 per cent of road transport nitrogen oxide (NO_x) emissions in London in 2010 – 24 per cent by HGVs and 12 per cent by LGVs.
- Road freight transport was estimated to be responsible for 39 per cent of road transport particulate matter (PM₁₀) emissions in London in 2010 – 17 per cent by HGVs and 22 per cent by LGVs.

Time of day patterns

Figure 3 shows how van and lorry traffic is distributed across the hours of the day. The values are for traffic entering and leaving the central London Congestion Charging Zone, on the basis of an average day of a 7-day week. For both types of vehicle, but especially for HGVs, there is a pronounced morning peak in activity. Nearly 10 per cent of daily HGV traffic occurs between the hours of 7 and 8 am. Activity then tails off as the day progresses, especially for the heavier vehicles.

Figure 3 Vans and lorries entering/leaving the central London congestion charging zone. Proportion of daily traffic occurring per hour. 7-day week average.



Recent policies affecting the freight sector in London

- The London Low Emission Zone scheme seeks to improve air quality by mandating minimum technology standards ('Euro' emissions classes) for goods vehicles. Effective compliance rates of near 100 per cent have been achieved, although concentrations of nitrogen dioxide remain a serious policy concern in London going forward.

- The Freight Operators Recognition Scheme (FORS) is an accreditation scheme that provides freight operators with advice and guidance to help improve the efficiency and safety of their operations. By spring 2012 approximately 100,000 goods vehicle operating in London had been registered for FORS.
- A particularly successful aspect of the London 2012 Olympic and Paralympic Games was the extent to which freight operators changed their behaviour in response to TfL's Travel Demand Management (TDM) advice. A particular aspect of this was 'time-shifting' by vehicle operators, so as to avoid the busiest times and places on the network. Figure 4 shows this effect in terms of changes to the hourly distribution of heavy goods vehicles entering the central London congestion charging zone. Although the Games themselves were temporary, various initiatives are underway to further embed this behaviour – where it is mutually beneficial – for the future.

Figure 4 HGVs entering the central London Congestion Charging Zone by hour of day. 2011 average day vs. average days (7-day week) during London 2012 Olympic and Paralympic Games.

