



# URBAN TRANSPORT GROUP

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Call for Evidence response

## **The Last Mile: a Call for Evidence on the opportunities available to deliver goods more sustainably**

Department for Transport

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Rebecca Fuller  
Assistant Director

**Urban Transport Group**  
Wellington House  
40-50 Wellington Street  
Leeds – LS1 2DE  
0113 251 7445  
[info@urbantransportgroup.org](mailto:info@urbantransportgroup.org)



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## 1. Introduction

- 1.1. The Urban Transport Group (UTG) brings together and promotes the interests of Britain's largest urban areas on transport. Our full members are Merseytravel, Nexus (Tyne and Wear), South Yorkshire Passenger Transport Executive, Transport for Greater Manchester, Transport for London, Transport for West Midlands and West Yorkshire Combined Authority.
- 1.2. Our associate members are Nottingham City Council, Strathclyde Partnership for Transport, Tees Valley Combined Authority and the West of England Combined Authority. Between them our members serve over 24 million people. This evidence is on behalf of our full members.
- 1.3. Our members plan, procure, provide and promote public transport in some of Britain's largest city regions, with the aim of delivering integrated public transport networks accessible to all.

## 2. Response

### Summary

- 2.1. The 'last mile' of distribution, as good travel to their final destination – often in the heart of city centres - is potentially the most significant freight issue for urban areas. Goods including retail stock, stationery supplies, documents, food, drink, parcels, medicines and construction materials all must find their way to shops, offices, bars, restaurants, homes, hospitals and building sites.
- 2.2. The way in which these goods are dealt with has wide ranging implications for the economy, employment and growth but also for congestion, safety, emissions, road maintenance, noise, vibration, quality of life and the urban realm.
- 2.3. It forms part of a much wider debate about what kind of cities we want to live in and how we want them to look and feel. Interventions around the last mile should be safe, smart and clean, maximising the benefits and minimising the negative impacts for local economies, the environment and communities.
- 2.4. We therefore welcome the Department's commitment to harness greener deliveries, making the most of electrical delivery modes and the benefits they bring in terms of carbon reduction, air quality improvements and greater safety for other road users, particularly pedestrians and cyclists.
- 2.5. However, whilst e-cargo bikes, micro vehicles and e-vans are undoubtedly key components in transforming the last mile, we believe that they should form part of a wider package which also includes more consolidation of consignments; maximising the potential of rail and water infrastructure for city centre deliveries; and influencing customer behaviour. Innovation in the last mile could be incentivised via a new challenge fund.

### **The potential of e-vans, micro vehicles and e-cargo bikes to provide more efficient, lower impact and greener cargo transport**

- 2.6. We welcome the recognition this call for evidence gives to the potential for increased use of e-cargo bikes, micro-vehicles and e-vans in last mile deliveries. Such vehicles are cleaner



and quieter than diesel fuelled vans (which they are best positioned to replace) and of a more suitable scale for our city streets than HGVs.

- 2.7. In the case of e-cargo bikes and micro-vehicles there are also important safety benefits, particularly for pedestrians and cyclists.
- 2.8. E-cargo bikes have the added advantage of being able to travel through congested areas more quickly than vans and reach places that vans cannot, without having to find parking.
- 2.9. The potential of e-cargo bikes in particular to replace van trips will depend on the type of journeys made, the weight of loads carried and journey purpose. A plumber, for example, is likely to always need a van in order to carry all of their tools and equipment. However, as noted in the call for evidence, supermarkets dropping off grocery deliveries to households have trialled the replacement of vans with electric cargo cycles with great success<sup>1</sup>.
- 2.10. Research by the European funded Cycle Logistics project found that 51% of all motorised private and commercial trips related to goods transport in EU cities could be shifted to bikes and cargo bikes<sup>2</sup>.
- 2.11. Greener alternatives to conventional, diesel fuelled vans are urgently needed. Vans are the fastest growing segment of road traffic in Great Britain. Van traffic has grown by 71% over the last 20 years, compared to growth of 13% for cars and 2.1% for HGVs<sup>3</sup>. Between 2015 and 2016 alone, van traffic grew 4.7% to reach a record high of 49.1 billion vehicle miles.
- 2.12. Explanations for this growth are many and varied, ranging from economic growth to lighter regulation of vans compared to HGVs and from rising e-commerce to increasing self-employment<sup>4</sup>.
- 2.13. The growth in van traffic is expected to continue for the foreseeable future. DfT's Road Traffic Forecasts project van mileage growth of 79% between 2010 and 2040, compared to 9% for cars and 22% for HGVs<sup>5</sup>.
- 2.14. Some 96% of registered vans are diesel fuelled<sup>6</sup>. Whilst lower in carbon dioxide (CO<sub>2</sub>) emissions and more fuel efficient than petrol equivalents, diesel vehicles produce higher levels of nitrogen oxide (NO<sub>x</sub>) and particulate matter which contribute to air pollution and are harmful to public health. Currently vans make up 15% of road traffic<sup>7</sup> but contribute 30% of NO<sub>x</sub> emissions from road transport (the second biggest road transport contributor after cars)<sup>8</sup>.
- 2.15. Without a transition to greener vehicle technology (ideally zero emission) the growth in van traffic will be accompanied by growing levels of pollution.

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<sup>1</sup> 'Sainsbury's trials UK's first grocery delivery service by electric cargo bike', News Release 19/04/18 <https://www.about.sainsburys.co.uk/news/latest-news/2018/18-04-2018-electriccargobiketrial>

<sup>2</sup> Cycle Logistics (2014) Cycle Logistics Resource Pack – Commercial Delivery Using Cargo Bikes [http://cyclelogistics.eu/docs/202/D3\\_2\\_Resource\\_Pack\\_Outspoken\\_DeliveryFinal.pdf](http://cyclelogistics.eu/docs/202/D3_2_Resource_Pack_Outspoken_DeliveryFinal.pdf)

<sup>3</sup> DfT (2017) Road Traffic Estimates Great Britain 2016.

<sup>4</sup> See UTG (2018)

<sup>5</sup> DfT (2015) Road Traffic Forecasts 2015.

<sup>6</sup> DfT (2017) Vehicle Licensing Statistics, table VEH0105

<sup>7</sup> DfT Transport Statistics table TRA0101 (2015)

<sup>8</sup> DfT Transport Statistics table ENV0301 (2015)



### Barriers to sustainable last mile delivery and how they might be removed

- 2.16. Take-up of cleaner alternatives to diesel fuelled vans has so far been very low. There were 1,300 new electric van registrations in 2017 – an increase of 300 on the previous year, but still accounting for just 0.3% of new van registrations<sup>9</sup>.
- 2.17. Take-up of the plug-in van grant has also been low. Factors such as supply of vehicles, cost and confidence in the technology are still significant barriers. Even with grants at their current levels, e-vans are still prohibitively expensive for many small businesses and the second hand market for EVs has not yet developed.
- 2.18. The Government’s decision to end the sale of new petrol and diesel cars and vans by 2040 will assist in the transition but significant action is needed far sooner to speed up the process, including steps to make alternative options more visible and affordable.
- 2.19. Labelling vehicles with ‘total cost of ownership’ figures would also be helpful in highlighting the long-term savings of a micro or e-van compared to a diesel equivalent.
- 2.20. There also needs to be more awareness-raising around the potential of cargo-bikes, particularly the potential of some models to carry payloads of up to 250kg (comparable with a small van)<sup>10</sup>.
- 2.21. More interactive, user-friendly guides to the vehicles available would also be helpful, particularly for small businesses with limited resources to devote to researching the options.
- 2.22. One-to-one support for businesses can be helpful too. The ECO Stars programme<sup>11</sup>, for example, offers expert support to fleet operators wishing to improve their efficiency and environmental performance, including site visits to assess needs, priorities and options for fleet renewal. Companies taking part in the scheme have found, for example, that they can exchange larger vehicles for smaller, more efficient ones with a similar payload and, in some cases have replaced diesel vans with electric<sup>12</sup>.

### Scope for other measures to improve logistical efficiency

- 2.23. To maximise the potential of e-vans, micro vehicles and e-cargo bikes, their use should be combined with measures to reduce the number of journeys made, including though maximising consolidation of deliveries; making greater use of rail and water infrastructure; and influencing customer behaviour. Without this, roads will become increasingly congested, restricting economic growth and reducing quality of life in our towns and cities. Innovation in the last mile could be incentivised via a new challenge fund.

### *Maximising consolidation of deliveries*

- 2.24. Despite the highly competitive nature of the road freight industry, the efficiency of the last mile cannot be taken as a given. Inefficiencies in the last mile can lead to more vehicle movements and more time on the road than necessary, exacerbating congestion. A green

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<sup>9</sup> DfT Transport Statistics table VEH0453 (2017)

<sup>10</sup> Cycle Logistics (2014) Cycle Logistics Resource Pack – Commercial Delivery Using Cargo Bikes [http://cyclelogistics.eu/docs/202/D3\\_2\\_Resource\\_Pack\\_Outspoken\\_DeliveryFinal.pdf](http://cyclelogistics.eu/docs/202/D3_2_Resource_Pack_Outspoken_DeliveryFinal.pdf)

<sup>11</sup> <https://www.ecostars-uk.com/>

<sup>12</sup> ECO Stars (2018) ECO Stars Case Study: South Yorkshire Housing Association Neighbourhood Environmental Action Team [http://www.ecostars-uk.com/wp-content/uploads/2018/02/SYHA\\_NEAT\\_Case-Study\\_FINAL-1.pdf](http://www.ecostars-uk.com/wp-content/uploads/2018/02/SYHA_NEAT_Case-Study_FINAL-1.pdf)



traffic jam is still a traffic jam and detracts from the call for evidence's vision of beautiful, liveable and connected towns and cities.

2.25. Inefficiencies in the last mile could include:

- Low load factors and empty running – research in London has found that the average van is 38% full<sup>13</sup>.
- Multiple vehicles from various companies delivering goods to the same neighbourhoods or businesses
- A high number of low volume or weight deliveries made to individual premises within a given time period.
- Long dwell times at loading or unloading points, where these are located on street.

2.26. Any plan for greening and improving the efficiency of the last mile should start with how we can reduce the number of journeys needed in the first instance. Electrically powered, large or small - all vehicles contribute to congestion. The journeys that are taken should be made as efficiently as possible.

2.27. Where possible, e-cargo bikes, micro-vehicles and e-vans should operate from consolidation facilities, whether on the outskirts of urban areas (Urban Consolidation Centres) or in the heart of city centres via micro consolidation hubs.

2.28. We note that consolidation centres and hubs are referred to in the call for evidence but are not explored in detail. We see them as the means by which e-cargo bikes, micro-vehicles and e-vans become practical solutions and, as such, something that DfT should actively support and promote in tandem with clean vehicle technology.

2.29. In many cases, due to vehicle range and load factors, deliveries are unlikely to be able to complete their entire journey using smaller electric vehicles. This means that they will make their way to the outskirts of cities using a different mode, usually by HGV (although we would like to see greater use of rail and water). These goods will then need to be transferred onto smaller, cleaner vehicles which are more suited to city centre environments.

2.30. Consolidation centres and hubs mean these goods can be sorted and ideally combined into full loads for delivery using short range, zero emission vehicles. Doing so reduces the number of trips needed, maximises the space available on-board and encourages 'right-sizing' - using the right-sized vehicle for the right job from a varied fleet located on site.

2.31. An example of consolidation in action is London based parcel delivery company Gnewt. Parcel networks despatch their consignments to the company's facility in Bow where they are consolidated for delivery using a fully electric fleet of vehicles. The company delivered three million items in 2017 and achieved reductions in CO<sub>2</sub> of 67% per parcel<sup>14</sup>.

2.32. It should be noted that in some cases, consolidating deliveries into fewer, larger trucks may be a more effective means of reducing the number of vehicles on the road.

2.33. The London Boroughs Consolidation Centre, for example, brings together orders for items such as stationery and cleaning products from a number of London councils. Consolidating goods for onward delivery using two 7.5 tonne Euro 5 trucks (operating to specified safety

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<sup>13</sup> Transport for London Roads Task Force (2013) Technical Note 5 – What are the main trends and developments affecting van traffic in London?

<sup>14</sup> See <https://www.gnewtcargo.co.uk/> visited on 20/08/18.



and quality standards) cut vehicle trips by 46%, CO<sub>2</sub> by 41%, NOx by 51% and particulate matter by 69%<sup>15</sup>. Such approaches can be particularly effective if large vehicles travel the last mile during the night when there are fewer pedestrians and cyclists. More broadly, night time deliveries have been shown to be very effective in reducing fuel use and subsequent emissions. TfL has developed a useful toolkit to support night deliveries<sup>16</sup>.

- 2.34. Locating consolidation centres on the outskirts or in the heart of cities overcomes the range limitations of electric vehicles, as well as allowing them to shuttle to and from base multiple times during the day.
- 2.35. These hubs do not necessarily need a large footprint and can operate from otherwise under-utilised spaces. They can operate from a static container located in a car park, for example, or from under a railway arch.
- 2.36. The government could support the growth of consolidation centres by making them a priority in national planning guidelines, backed by powers for local authorities to contract for these sites and mandate their use for categories of business should they consider this to be appropriate.

#### ***Making greater use of rail and water infrastructure***

- 2.37. Railway stations themselves have great potential to become last-mile delivery hubs. In 2014, Colas Rail and TNT Express operated a trial freight train from Rugby to London Euston, carrying express parcels and perishable products for distribution in central London. The goods arrived overnight when the station was otherwise unused and were sorted on the platform before being transferred to a fleet of TNT electric and low emission vehicles waiting on the platform. From arrival at Euston, the whole process took less than an hour.
- 2.38. The trial demonstrated the great potential of city railway stations as consolidation hubs. They are barely used at night and can be served by trains acting as high-speed mobile warehouse. The fact that all the sorting and loading can take place within station buildings minimises noise and disturbance for local residents. Their central location enables short-range, zero emission vehicles to be used for the last mile.
- 2.39. Infrastructure for the loading and unloading of waterborne freight can also be available in cities that have rivers or canals passing through them, although freight must often compete against more remunerative uses for the land, such as residential and office developments. Whilst unusual for last mile deliveries, the use of water-based infrastructure is not unheard of. The city of Utrecht in the Netherlands uses a zero emission electric boat to make city centre deliveries. Owned and run by the city, the vessel makes six trips, four days a week supplying more than 60 catering businesses located along the canal network. The primary motivation for using the boat is to improve air quality<sup>17</sup>.

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<sup>15</sup> 'London Boroughs Consolidation Centre: A Public Sector Perspective on Consolidation' presentation by Kevin Churchill, London Borough of Camden at 'Urban Freight: The Last Mile Challenge for Cities' 26/09/14.

<sup>16</sup> All of TfL's toolkits for deliveries can be found here: <https://tfl.gov.uk/info-for/deliveries-in-london/delivering-efficiently/deliveries-toolkits>

<sup>17</sup> pteg (2015) Delivering the future: new approaches to urban freight  
<http://www.urbantransportgroup.org/resources/types/reports/delivering-future-new-approaches-urban-freight>



- 2.40. Our extensive network of inland waterways represents an underused resource with great potential for greening the last mile. Support is needed for the ongoing maintenance of waterways and the removal of barriers (such as low bridges or narrow locks) to ensure that they can accommodate more freight traffic if required.

***Influencing customer behaviour***

- 2.41. Changing the behaviour of individuals and businesses is another lever to improve the last mile and reduce the number of journeys made. Within organisations, individuals and teams can consolidate their orders resulting in fewer deliveries. Households can be nudged to select green delivery slots, making use of the times when vehicles are already in their neighbourhood. Greater use of lockers and parcel collection points are another way to reduce vehicle volume with vehicles making single drops rather than multiple journeys delivering door-to-door.

***Last mile innovation challenge fund***

- 2.42. There is much scope for innovation in the last mile to help reduce the volume and impact of urban freight operations. The Government could give consideration as to how to encourage and incentivise such innovation, potentially through a new challenge fund.
- 2.43. Encouraging innovation in this way could help grow local economies including through boosting efficiency and productivity; creating a more attractive urban realm; supporting small start-ups; and providing large companies with an opportunity to invest in communities.