Mayor of London - Mayor's Transport Strategy: Draft for Public Consultation

A submission by:

University of Southampton, University of Westminster, University of Lancaster and University College London

The Freight Traffic Control 2050 project academic team

- Professor Tom Cherrett (University of Southampton)
- Mr Fraser McLeod (University of Southampton)
- Professor Tolga Bektas (University of Southampton)
- Dr ThuBa Nguyen (University of Southampton)
- Dr Maja Piecyk (University of Westminster)
- Mr Julian Allen (University of Westminster)
- Ms Marzena Piotrowska (University of Westminster)
- Professor Adrian Friday (Lancaster University)
- Mr Oliver Bates ((Lancaster University)
- Dr Sarah Wise (University College London)

Background

We, the above named academics, are currently working on a project entitled Freight Traffic Control (FTC) 2050 (<u>www.FTC2050.com</u>) which has received funding from the Engineering and Physical Sciences Research Council (EPSRC). Partners in the project include freight transport companies and city transport authorities (including Transport for London). The FTC2050 project is currently investigating several topics that should be considered by authorities when developing integrated urban traffic management strategies to address and mitigate congestion which specifically tackle urban freight issues. These include to:

- Work with freight carriers to study their current operations in London and to quantify the geographical patterns and extent of driving and walking on vehicle delivery journeys.
- Identify the key issues and difficulties associated with these freight transport operations from public and private sector perspectives.

- Develop new computational approaches that can enhance vehicle and walking routeing and scheduling decision-making, and to demonstrate its potential effectiveness.
- Analyse what will happen to the efficiency of these vehicle operations and their negative traffic and environmental impacts if they are subject to slower vehicle speeds and more unpredictable journey time reliability in future.
- Trial and evaluate new methods of carrying out these deliveries that involve consolidation, including the use of walking porters to receive parcels at kerbside and carry out deliveries on-foot.
- Investigate using a 'carrier's carrier' for last mile distribution where one carrier hands over goods to another to make the final deliveries using cleaner vehicles, in order to consolidate goods onto fewer delivery vehicles.
- Evaluate whether the logistics industry will be able to implement more efficient and sustainable operations in the face of pressures that include reducing road space allocation, slower vehicle speeds and logistics sprawl, or whether it will be necessary for a third-party 'Freight Traffic Controller' (which could be a private organisation or a city authority) to aid the management of vehicles over the urban last-mile for the more equitable and efficient use of road and kerbside space and time.

We have used a template that lists all the policies and proposals contained in the Mayor's Draft Transport Strategy that we have responded to and have added our response in the right hand column, , drawing on our work in the FTC2050 project.

		Comments
Policy 1	The Mayor, through TfL and the boroughs, and working with other transport providers, will seek to make London a city where people choose to walk and cycle more often by improving street environments, making it easier for everyone to get around on foot and by bike, and promoting the benefits of active travel. The Mayor's aim is that, by 2041, all Londoners do at least the 20 minutes of active travel they need to stay healthy each day.	Our research in the parcel sector in central London has shown that walking is an important component of the job of these delivery personnel. In the operations studied, drivers use vans to drive short distances between stopping locations, but then walk, on average, to two different receiver's buildings with their parcels at each stop. On average, the vehicles spend approximately 60% of the total journey time parked at the kerbside while the driver unloads, sorts and delivers the parcels on-foot. The average horizontal distance walked by a driver on these multi-stop vehicle journeys is 8 kilometres (i.e. 5 miles - and this does not account for the vertical distances travelled climbing and descending staircases). Walking accounts for approximately 30% of the total journey distance travelled from the depot, with 95% of vehicle stops taking place on-street at the kerbside. The average driving time between vehicle stopping locations was approximately 4 minutes, with an average 8 minutes kerbside parking time at each vehicle stop. These delivery personnel could therefore as easily be termed 'walkers' as 'drivers'.
		In addition, some package and food delivery companies make use of cycle couriers to carry out their collections and deliveries in central London. In other freight (goods and service) transport sectors, involving the movement of heavier, bulkier products and equipment/tools, the driver aims to minimise the distance from vehicle parking point to delivery point as much as possible. However, in all freight transport operations in which the vehicle is parked at the kerbside, it is necessary for the delivery/collection personnel to at least cross the pavement with the goods/tools/equipment.

Proposal 1	The Mayor, through TfL and the boroughs, will improve and manage London's streets to create a high-quality public realm that encourages walking and cycling by all Londoners by: a) Creating 'Liveable Neighbourhoods' to improve the public's experience of walking, cycling and using public transport and to increase opportunities to use streets as	It is important that the Mayor includes consideration of the walking and cycling component of freight transport operations in his walking and cycling strategies and policies. The fact that vans are currently used as mini warehouses from where walking rounds emanate is an important consideration when deciding on waiting restrictions and loading/un-loading areas. See note above against Policy 1 regarding the importance of walking in freight transport operations, and therefore the need to include this in walking strategies and plans. Also, cycling is of importance in freight transport in the courier and food delivery sectors, with the latter growing rapidly. Again, this should be reflected in cycling strategies and facilities.
	 public spaces and for play, and to encourage fewer trips by car. b) Providing 'Healthy Routes' to create attractive, safe and accessible walking routes to schools and other local destinations, such as shops, health services and parks, with a particular focus on improving conditions for children, older people and disabled people. c) Providing more cycle parking, particularly in residential areas, town centres, public transport interchanges and at key destinations. d) Improving the accessibility of streets for older and disabled Londoners through measures including removing obstacles, widening pavements for wheelchair access, introducing tactile paving, raising sections of roadway to make crossing easier, providing seating and, where possible, ensuring on street cycling facilities cater for the wide range of cycles used by disabled people. e) Ensuring any scheme being undertaken on London's 	 Freight transport operations that involve substantial walking and cycling components should be promoted as healthy activities and jobs. There is also a need to consider and design for the walking component across the pavement from vehicle to delivery point that is intrinsic to all road freight (goods and service) operations that involve parking on-street. Also, Londoners require freight operations to their homes (both the provision of goods and services). These freight operations in residential locations and to residential addresses need to be taken account of in street design.

	streets for any reason improves conditions for walking and cycling.	
Proposal 2	The Mayor, through TfL, will work with the central London boroughs to transform the experience of the walking and cycling environment in central London by reducing the dominance of vehicular traffic, including by transforming Oxford Street and looking urgently at changes to Parliament Square.	The Mayor has expressed the aim to reduce AM peak road freight by 10% by 2041. Reductions in AM peak road freight of this order were achieved during the London 2012 Olympics and Paralympics but this was for a relatively short, defined period of time and was supported with substantial awareness raising and training resources, together with relaxations of existing time restrictions on specific buildings by local authorities. To achieve reductions in AM peak freight traffic on this scale on an on-going basis will require the allocation of significant efforts and resources, the long-term support of London's boroughs, changes to existing delivery time restrictions imposed on buildings and kerbsides, and innovations and uptake in urban freight operations and technology. Given that the reason for such a reduction in AM peak road traffic is to improve the experience of the walking and cycling environment, efforts should be made to facilitate the greatest use possible of these modes for freight (goods and servicing) transport as explained above.
Proposal 3	The Mayor, through TfL and the boroughs, will deliver a London wide network of cycle routes, with new routes and improved infrastructure to tackle barriers to cycling. The Mayor's aim is for 70 per cent of Londoners to live within 400 metres of a high-quality, safe cycle route by 2041.	The planning and design of an extended network of cycle routes should take account of the freight (goods and service) transport needs of businesses and residents located on these cycle routes from the outset to avoid unintended negative operational impacts on these operations that are vital to London's economy and the smooth functioning of London's businesses. Lessons can be learned in this respect from the cycle routes already implemented and the consequences of not considering freight

Proposal 5The Mayor, through TfL and the boroughs, will make it easier for people to walk and cycle in London by: a) Maintaining, expanding and improving 'Legible London' pedestrian wayfinding maps and ensuring that on-street cycle network signage is clear and consistent. b) Using new data to develop and improve online journey planning and navigation tools that will make walking and cycling trips the most easy journeys to plan.This plan service tra goods and heavy equ importanta)The Mayor, through TfL and the boroughs, will make it easier for people to walk and cycle in London by: a) Maintaining, expanding and improving 'Legible London' pedestrian wayfinding maps and ensuring that on-street cycle network signage is clear and consistent. b) Using new data to develop and improve online journey planning and navigation tools that will make walking and cycling trips the most easy journeys to plan.All goods to Propos and improvider to case of he distance a the point of smaller free driver/proving take acco service tra	
8 local communities and cultural organisations to promote and other	ering one-off, regular or trial street closures, the Mayor relevant organisations need to fully understand the bods and service requirements of these locations and

	motorised traffic so that Londoners can see their streets differently.	the vehicle activity that supports it in order to ensure that unintended negative consequences on the businesses and residents living in these locations are not unduly affected, and also to help minimise the negative impacts on freight and serve companies and their personnel.
		Such street closures may well require the provision of additional goods and service transport-related infrastructure on surrounding streets. In the case of operations that involve the delivery of heavy, bulky goods and the provision of services that require the use of heavy equipment, tools and parts it will be necessary to consider the need to provide exemptions from such street closures. Within the FTC2050 project, we have been working with carriers to better understand the package generation by postcode using their raw manifest data. Such an approach could provide TfL with a new way of quantifying high freight activity areas which would be adversely affected by such a closure policy.
15	The Mayor, through TfL and the boroughs, will work with business and the freight industry to improve the efficiency and safety of freight and servicing in London by:	The work being carried out in the Freight Traffic Control (FTC) 2050 project is directly addressing many of the points raised by the Mayor in proposal 15. A summary of this FTC 2050 work, its findings to date and its ambition is provided below in response
	a) Developing tailored and targeted approaches to address the unique challenges faced by the individual sectors such as food and construction deliveries.	to proposal 15. The Mayor should continue and build on the existing efforts by TfL to improve the efficiency of freight (goods and service)
	b) Planning a strategic consolidation and distribution network, including a review of funding requirements, and protecting industrial land through the London Plan.	transport operations in London. This includes continuing to pursue existing consolidation and retiming work with freight operators, shippers and receivers, and work to bring about cleaner and safer goods vehicles and vehicle operations in London. It should also involve continuing to identify and
	c) Encouraging London's businesses, starting with	implement suitable freight routeing solutions, provide adequate

d) e) f) g)	Business Improvement Districts, to work together to use their procurement power to reduce or re-time their deliveries and servicing trips to avoid traffic congestion. Ensuring that all London is within a 30-minute drive of a construction consolidation centre and encouraging their use through Construction Logistics Plans and the planning process. Encouraging businesses in central London to ban personal deliveries, and extending the network of collection points in order to reduce the overall number of work place personal deliveries. Working with Business Improvement Districts to promote waste and recycling consolidation, using the waste consolidation toolkit. Developing a 'London lorry standard' to simplify the regulatory environment for HGVs operating in London	freight infrastructure (at the kerbside, off-street and in terms of drivers' rest areas) and seek opportunities for modal shift for operational support, technology development, and infrastructure improvements. A key area that requires far more attention than in the past is the issue of land use and freight transport, and the role it can play in helping to achieve efficient, sustainable freight transport operations – this ranges from strategic design-making and safeguarding of logistics land in London that can help to reduce vehicle stem mileages and hence freight activity becoming ever-more intensive, through to the provision of appropriate road freight infrastructure on the road and at the kerbside that helps meet the demand as efficiently and sustainably as possible, through to improving freight trip generation assessment capabilities in TfL and the boroughs. The effect of freight consolidation is that the same quantity of goods and services can be provided within an urban area with the use of less freight transport activity (vehicle km, journey time, fuel consumption, kerbside space and time etc.). Consolidation can be achieved in many different ways and at many different locations in the urban supply chain. There is a hierarchy of consolidation facilities based on different urban locations that can serve different types of goods and service flows. These locations can be used to support a variety of different consolidation approaches including: Urban Consolidation Centres, micro-consolidation centres and mobile depots, kerbside consolidation using portering systems, and internal logistics/concierge systems and collective procurement to achieve consolidation in large multi-tenanted buildings. In addition, through operational collaboration, freight transport operators can facilitate goods consolidation upstream in their supply chains so as to reduce vehicle trip generation prior to its
----------------------	---	---

last-leg despatch to/within the urban area - with companies working together to share their work for given geographical locations. Much consolidation of goods already takes place in freight operations – such as retail, and hub-depot flows in the parcels sector.
There are several factors that the FTC 2050 project has identified and is researching that are resulting in an intensification of freight transport operations in London, which are summarised here. The reduction of on-site storage space in retail stores and offices over time, as a result of rising land values, has led to smaller, more frequent deliveries and thereby more intensive freight transport systems. Other factors that have resulted in less sustainable freight transport systems in London include the relative price of freight transport compared to other logistics costs, together with the underpricing of delivery services by ecommerce retailers in their effort to gain market share (with many offering 'free' delivery), resulting in the imposition of external costs on the road network, society and environment. Consumers' desire for the ever-faster response times offered by ecommerce retailers is also leading to a rapid growth in less sustainable freight transport operations – as seen in, for instance, hot meal delivery services (with one meal delivered per transport journey – by car, motorbike or bicycle). The lack of availability and affordability of logistics land in London, especially in central and inner urban areas, is also leading to a reduction in the sustainability of some freight transport operations. The Mayor should take urgent steps to
investigate these sources of freight transport intensification that threaten to undo good work carried out to improve freight sustainability, and then take appropriate action to limit their impact and growth.

There is an important role that the Mayor can take in advising and educating those working and living in London about the impact of the freight transport and delivery decisions that they take when ordering and purchasing goods and services, and promoting changes in these people's behaviour in order to reduce freight transport intensity and its undesirable impacts.
The Mayor's Draft Transport Strategy makes no reference to the potential concept of the Mayor/TfL as a future Freight Traffic Controller for London. This role may be necessary in future if the industry does not manage to innovate sufficiently to reduce the level of road freight vehicle activity necessary to deliver the required (and growing) quantity of goods and services that will be required by business and households in London. This concept is central to the research being carried out in the FTC 2050 project.
Proposal 15 also states the Mayor's ambition to reduce the number of personal deliveries to workplaces. However the FTC 2050 academic team are unaware of the necessary research having been carried out to demonstrate that this is definitely the most sustainable and efficient solution to the problem of online shopping. There is a need to study the range of ecommerce delivery systems (to home, to locker bank, to collection point, and where these should be located – near home or work – and to workplace either direct or to nominated carrier for final movement in a consolidated load) before it is possible to determine the best solution.

Policy 19	 The Mayor, through TfL and the boroughs, will ensure that new homes and jobs in London are delivered in line with the transport principles of 'good growth' for current and future Londoners by using transport to: a) create high-density, mixed-use places, and b) unlock growth potential in underdeveloped parts of the city. 	It is necessary that the Mayor and TfL gain a better understanding of freight vehicle trip generation rates associated with different land uses and business types in order to gain insight into suitable forms of mixed use development, and to ensure that residents in mixed use developments are not unduly disturbed and disrupted by goods vehicle activity (i.e. vehicle numbers and timing of vehicle activities). New understanding is being gained in this area as part of the FTC 2050 project where carrier manifest data are being used to quantify delivery 'hotspots' by postcode. This approach can be used to identify areas where freight activity is more intense and where 'nearby' delivery areas would be warranted. We urge the Mayor, through TfL to work with logistics providers to better understand freight activity through this method going forward.
		In the case of the Mayor's aspiration of achieving off-peak retiming of freight transport operations, this will need to be considered carefully in relation to mixed use developments with a residential component.
Proposal 77	The Mayor, through TfL and the boroughs, will seek to ensure that delivery and servicing plans facilitate off-peak deliveries using quiet technology, and the use of more sustainable modes of delivery, including cargo bikes and electric vehicles where practicable. Large-scale developments and area-wide plans should include a local consolidation strategy (consisting of measures such as shared procurement for consumables, coordinated waste and recycling collection, timetabled deliveries, 'click and collect' for residents and flexible loading bays). TfL will work with boroughs and other stakeholders to pilot ambitious plans in Opportunity Areas and around major	As pointed out above, improved knowledge and information concerning freight vehicle trip generation is essential to the Mayor for both planning decisions concerning individual sites and major brownfield development areas. Such insight would ensure that the freight vehicle trip generation associated with such developments can be accommodated by the local road network and also that the off-street freight facilities required to accommodate the freight trip generation associated with these sites is designed into these new sites and developments and does not result in negative impacts for neighbours and the local population.

	developments such as High Speed Two (HS2) to reduce the impact of construction and freight-related trips.	Delivery and Servicing Plans have an important role to play in helping to bring about more sustainable and efficient freight transport operations (for goods and services) but will require more effective monitoring and enforcement actions and powers than they have at present if this is to be achieved – and this has both resource implications and planning power/punitive power requirements.
		Although the Mayor has a stated aim to retime some AM peak road freight traffic, there is currently much pressure for rapid replenishment of goods and ever-faster speed of service. In order to achieve his retiming aspirations, the Mayor needs to obtain greater understanding of the necessity of lead time requirements for goods delivery and rapid service provision. The level of freight transport retiming that was achieved during the London 2012 Olympics and Paralympics will be difficult to repeat again without relaxation of some existing regulations, and co-operation of boroughs and supply chain partners, and possibly compulsion.
Proposal 91	The Mayor, through TfL, will consider, when surplus transport land becomes available, its accessibility to the transport network and its potential for the development of sustainable, affordable housing. Any capital receipts generated from the sale of TfL surplus land shall be allocated to TfL's transport investment programme.	Achieving more efficient and sustainable freight transport (i.e. goods and service provision) through consolidation will require greater use of micro-consolidation centres (as recognised by the Mayor in the draft in the MTS). However, in order to achieve the provision of such micro-consolidation centres to serve central and inner London it will be necessary for the public sector (the Mayor, boroughs etc.) to make available to freight transport operators affordable land for such use (as the profitability of the freight sector is such that it cannot compete for this land with other business sectors including residential housing developers). The Mayor therefore has an important role to play in ensuring the provision of available, affordable land for such

		freight operations. Without such action, freight depots are likely to continue to be relocated ever-further from the centre of London, including well-beyond the edge of London. This will lead to ever-longer stem mileages for goods vehicle journeys destined for inner and central London, which will add to the pressure on London's road network. Up until now, the Mayor and the London boroughs have tended to continue to seek revenue maximisation from their land holdings rather than using some of this resource to achieve their goals of bringing about a more sustainable urban freight transport system. However, by reviewing their land portfolios and making some of these sites available for affordable logistics operation the Mayor and other public sector bodies can play an important role in reducing road freight transport intensity in London.
Proposal 92	The Mayor, through TfL, will pursue opportunities for mixed-use development and redevelopment in and around operational sites such as rail or bus stations to deliver much-needed housing and regeneration, while continuing to protect, and enhance where practicably possible, transport operations.	As the draft MTS recognises, rail freight has the potential to play a more important role in carrying London's freight. However, in order to prioritise the use of existing rail and bus station space for freight purposes, the Mayor will need to bring together the varied stakeholders to make this happen (TfL, Network Rail, Rail Freight operators, passenger rail operators, freight companies, retailers and manufacturers etc.). It will also require a reallocation of space on the rail network and within stations to these freight operations. Research carried out as part of the LaMiLo project by the University of Westminster has already indicated the potential for greater rail freight, much of which can take place outside of peak passenger commuting hours, but which will require high level political support and possibly changes to the goals and priorities of Rail Operating Companies.

Policy 21	 The Mayor, through TfL, will manage new transport services in London so that they support the Healthy Streets Approach, guided by the following principles: a) Supporting mode shift away from car travel: new transport services should not encourage more car journeys, especially where there are good walking, cycling or public transport options. b) Complementing the public transport system: new services should help more people who would otherwise complete their journey by car to access the public transport network, while not reducing walking and cycling to and from stops and stations. They should also provide a means of travel in areas where public transport connectivity is currently poor (especially in outer London). c) Opening travel to all: new services should be accessible to all Londoners and should not contribute to the creation of social, economic or digital divides in which some London's air: new services should prioritise ultra-low and zero emission vehicles to reduce emissions of carbon dioxide, nitrogen oxides and particulate matter in London and enable faster switching to cleaner technologies. e) Creating a safe, attractive environment on our streets: 	Policy 21 currently contains no goods (i.e. freight and servicing) transport dimension in terms of the use of kerbside by these vehicles to achieve efficient freight operations. FTC 2050 research has indicated the potential to free up substantial kerbside space and time in important freight transport sectors through the use of delivery porters who would meet arriving freight vehicles at the kerbside and then make these deliveries on-foot, thereby allowing the driver and vehicle to depart the kerbside quickly. Initial work has suggested that in some cases, carrier vehicle rounds could be reduced by 5 hours per day through a move to a drive-and-drop policy using porters. This concept will be demonstrated in London in the FTC 2050 project soon. This portering concept may also require the provision of allocated on- or off-street vehicle loading bays, together with portering reception facilities that would provide secure storage for incoming and outgoing goods.

	London's streets, where it is more attractive to walk or cycle, and should not lead to existing active trips being	
	made by non-active modes. There must always be an emphasis on the safety of passengers, pedestrians,	
	cyclists and other road users.	
	f) Using space efficiently: new services must make	
	efficient use of road and kerb space, be appropriate for	
	the area of London in which they operate, and share	
	data where possible to enable improved monitoring,	
	operating and planning of the transport network.	
Proposal 101	The Mayor, through TfL and working with the DfT and other stakeholders, will adopt an appropriate mix of policy and regulation to ensure connected and autonomous vehicles develop and are used in a way consistent with the policies and proposals of this strategy.	Despite the future implementation of autonomous freight vehicles, these will only be capable of reaching the kerbside. They will not be able to carry out the final leg of the delivery from vehicle to receiver (often inside a building, upstairs etc.) Robots will continue to be prohibitively expensive for carrying out these functions for many years even if the technology were to permit it. This final leg of the urban delivery in London will therefore still require the use of humans to carry it out for many decades. As well as being both financially and operationally viable now, the human portering systems that will soon be demonstrated in the FTC2050 project will also be able to be used in conjunction with future autonomous vehicles when these vehicles are ready for deployment. These portering solutions will also offer employment opportunities that will help compensate for the loss of freight vehicle driving jobs that the deployment of autonomous vehicles will be responsible for.
Proposal	The Mayor, through TfL and working with Government, will	To achieve consolidation in the provision of goods and services

102	 fund the delivery of the strategy by: a) Maximising any available efficiencies, subsid services at appropriate levels and ensuring that y for money is otherwise achieved from the existing planned transport network. b) Seeking to ensure a sustained level of funding fares, Business Rate Retention and other exi sources of income. c) Seeking additional taxes, powers or other si mechanisms, including Vehicle Excise Duty in Lor to create a fairer way of funding the deliver transport schemes and services, to better capture conserve the benefits they create and to enable delivery of the transport and community benefits the pursuit of this strategy will bring to London Wider South East and the UK as a whole. 	alue and benefits of such freight consolidation operations are equitably shared among supply chain partners. Otherwise, as previous research into innovative freight consolidation schemes has shown, these schemes will fail to function in a business environment despite their efficiency and transport sustainability potential they offer.
-----	---	---