Cargo bike action plan

Promoting and enabling the growth of cargo bikes to make them London's leading option for last-mile freight and servicing trips

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MAYOR OF LONDON

TRANSPORT FOR LONDON
EVERY JOURNEY MATTERS

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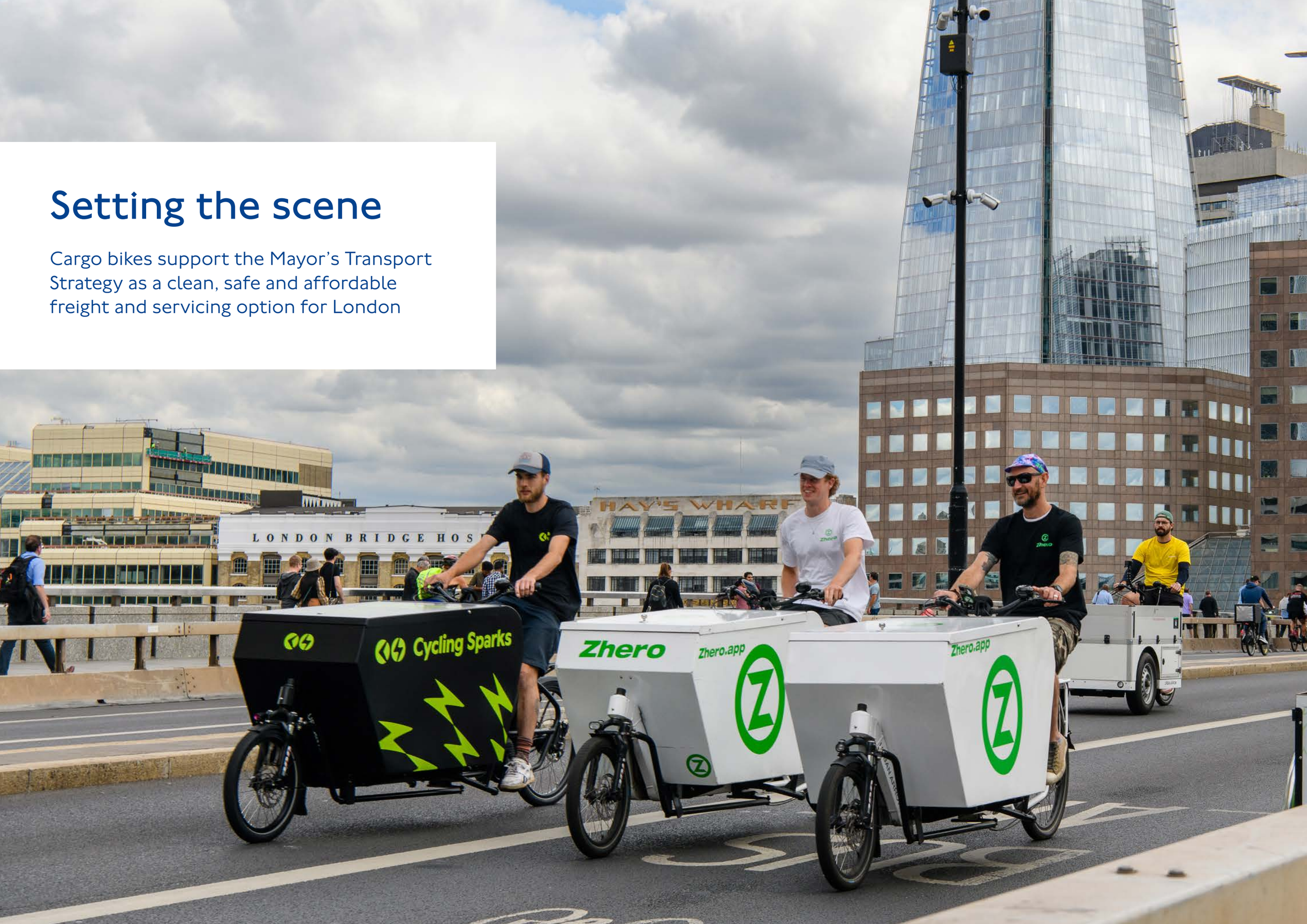
Setting the scene

Cargo bikes support the Mayor's Transport Strategy as a clean, safe and affordable freight and servicing option for London



Overview

Our aim is to make cargo bikes a leading option for last-mile freight and servicing trips

The overarching goal of the Mayor's Transport Strategy is that by 2041, 80 per cent of journeys are to be made by walking, cycling and public transport in London. The Healthy Streets Approach will improve air quality, reduce congestion and help make London's diverse communities greener, healthier and more attractive places to live, work, play and do business.

Cycling is fundamental to delivering the Healthy Streets Approach and it is suitable for all types of travel, including for delivery and servicing. Cycling can be appealing for private and commercial trips. While standard e-bikes are used to deliver food, groceries and other small package items, cargo bikes can handle larger items. This makes them an attractive solution for servicing and last-mile deliveries.

Cargo bikes are two-, three- or four-wheeled cycles designed to carry loads. They are an affordable, safe, clean and efficient alternative to vans and other light goods vehicles for many freight and servicing applications. Our goal is to promote and enable the growth of cargo bikes to make them a leading option for last-mile freight and service trips. Commercial cargo bikes are typically electrically-assisted, so this document focuses on electric cargo bikes, or e-cargo bikes.

Online retail sales, which have been steadily growing over the past decade, were boosted by the coronavirus pandemic, growing from 20 per cent before the pandemic to a high of 37.5 per cent[1]. While we have seen some decline in online shopping since, home deliveries remain high with 26 per cent of retail sales made online. Increasing van trips create more challenges around air quality, climate change and congestion in London. Cleaner and more efficient ways to deliver freight and services are therefore urgently needed.

The Mayor's ambition is for London to reach net zero carbon by 2030 while continuing to meet the wider ambitions of the Mayor's Transport Strategy. Cargo bikes can reduce van delivery and service trips across London and can be more efficient than vans for some applications. They deliver considerable carbon emission and air pollution savings, contribute to healthier and safer streets and enable better use of urban space. The rapid growth of cargo bikes during and after the pandemic demonstrates that they can be a sustainable and economically viable alternative for many van trips.

1 Calculated by the Office for National Statistics in February 2021

Insufficient or inappropriate infrastructure, a lack of knowledge by operators and businesses on the potential of cargo bikes, the cost of setting up cargo bike operations and the challenge of finding suitable land to support last-mile logistics have been identified as barriers to growth. To address these challenges, this plan sets out actions that cover growth, infrastructure and capacity, safety and behaviour change.

This plan is aimed at supporting organisations involved in delivery and servicing that use or are considering using cargo bikes for business applications, as well as boroughs and other authorities that can facilitate sustainable cargo bike growth.

17.5%

increase in online retail sales during the pandemic

26%

of retail sales were made online in 2022

Micromobility

Small, low-speed vehicles that can transport people or goods, including scooters, cycles, and cargo bikes. They include both electric and manual vehicles.

Micromobility hub

A dedicated area that provides storage space for micromobility vehicles and for handling and storing goods before they are transported. It could be used for one type, for example cargo bikes, or for a range of micromobility vehicles.

Examples of various uses of cargo bikes in London

Growth, infrastructure and capacity

E-commerce and home deliveries are driving an increase in van trips and we need to find ways to reduce van kilometres. In many cities the dominance of vans for last-mile deliveries is being increasingly challenged by cargo bikes. While the UK still lags behind other European countries in cargo bike sales for both domestic and commercial uses, there is huge potential for growth across the country and London in particular.

We developed a demand model to calculate the potential for cycle freight to replace van growth over time and by area in London. The model estimates that cargo bikes could replace between one and two per cent of van kilometres across Greater London by 2025 and between one and four per cent of van kilometres by 2030. Central London is expected to see the highest growth and could replace up to nine per cent of van kilometres by 2025 and 17 per cent of van kilometres by 2030. Our higher uptake forecast shows that this could equate to around 100 million van kilometres saved per year.

Suitable infrastructure, including land for micromobility hubs, messaging that supports cargo bikes as a clean last-mile delivery alternative, and borough support can result in cargo bike growth meeting the high-end estimates.

Cycle freight potential in van kilometres displaced by area

Area	Change in van kilometres between 2021 and 2025 (%)	Change in van kilometres between 2021 and 2030 (%)
Central London	3 to 9	6 to 17
Inner London	1 to 2	2 to 4
Outer London	0 to 1	1 to 2
Greater London	1 to 2	1 to 4

We want to promote cargo bikes as a clean option for businesses

Carbon savings resulting from cargo bike growth across Greater London could be between 10,000 and 30,000 tonnes of CO_2 a year by 2030, based on the calculation that one tonne of CO_2 is equivalent to driving 6,000km in a small diesel van. The higher uptake forecast could equate to around 100 million van kilometres saved per year. Cargo bikes also produce localised benefits by contributing to reduced congestion and presenting a lower risk to people walking and cycling than vans and heavy goods vehicles (HGVs).

Growth in cargo bikes, electrically-assisted vehicles and other personal mobility devices such as e-scooters will place increasing pressure on existing cycle lane infrastructure. We will monitor movements by cycle type to improve our understanding of cargo bike trips. We will enhance our demand model to identify where demand is most likely to grow in London. To accommodate for larger cycles, cycle lane capacity, parking spaces and adapted junctions will need to be considered in design and infrastructure planning.

Finding space for micromobility consolidation is important to support last-mile cargo bike deliveries. We will work with industry to understand their micromobility hub requirements and identify our land and third-party land that could be used for freight and micromobility hubs. We will also further support trials to transport goods by cargo bike where the journey involves a boat, train or other intermodal opportunities.

Safety

Cargo bikes need to be operated in a safe and considerate way. They are larger and heavier than other cycles and riders require additional skills. We will develop cargo bike guidance to help newer operators and those considering making the switch from vans to cargo bikes.

While cargo bikes are proving to be a very safe mode with few safety-related incidents, we need to collect safety data to enable industry and authorities to identify and address any issues. We will work to establish minimum and best-practice safety and training standards for cargo bikes, riders and operators. We will also encourage operators to adopt best practice through safety schemes.

Behaviour change

By issuing messaging, advice and promotional material, we will provide consistent communication on the benefits of cargo bikes. We will also use procurement as a lever to incentivise their use and support cargo bike growth.

We will promote cargo bikes as a preferred mode for those planning Low Traffic Neighbourhoods and borough-led vehicle emissions-based schemes.

As usage increases, businesses will become more familiar with cargo bikes and more likely to consider them for their freight and servicing operations.

Background

Cargo bikes are an affordable, safe, clean and efficient alternative to vans and other light goods vehicles in London

As well as providing freight and servicing solutions, cargo bikes support active travel and healthy streets, making them an option that can be well-supported by stakeholders aiming to make cities healthy and attractive places to be in.

Increased attention to online retail and last-mile deliveries, which were boosted by the coronavirus pandemic, have forced operators to pay closer attention to last-mile delivery efficiencies and costs. Last-mile and last-leg logistics operate in dense urban areas where air pollution and traffic congestion are most severe. As well as being a zero-emission option, cargo bikes can free up valuable street and kerb space where they replace vans.

30,000 CO_2

tonnes of CO_2 per year could be saved by 2030 by using cargo bikes

This plan was developed to promote and enable further growth of cargo bikes to make them a leading option for last-mile freight and servicing trips. It is aimed at organisations involved in delivery and servicing who use or are considering using cargo bikes for business applications, as well as boroughs and other authorities who can facilitate sustainable cargo bike growth.

Cargo bikes support the Mayor's ambition for London to reach net zero carbon by 2030 and contribute to the wider ambitions of having healthier, safer streets as set out in the Mayor's Transport Strategy. The plan also supports our Freight and servicing action plan that sets out the actions we can take to support the safe, clean and efficient freight operations that are fundamental to achieving the Mayor's vision as a city which is better to live and work in for all Londoners.

We are already seeing more cargo bikes on the roads and more being used for different purposes. They are particularly well-suited to last-mile deliveries.

The UK is the fourth largest e-commerce market in the world[2] with a turnover of £105 billion per annum. While online sales have dropped from a high of 37.5 per cent of retail sales during the coronavirus pandemic, they remained at more than 26 per cent of retail sales during 2022[3]. Online deliveries will retain their dominance and new ways need to be found to reduce their impact on traffic and the environment.

Cargo bikes are being deployed by smaller and larger businesses across many sectors of the economy. In London, several businesses already operate more than 50 cargo bikes. Parcel and consumer item deliveries are most common but service applications in construction and elsewhere are also beginning to emerge.

Many borough-supported cargo bike schemes are already active in London, some with funding support from the Department for Transport's (DfT) e-Cargo Bike Grant Fund for businesses.

2 www.retailtimes.co.uk/uk-e-commerce-market-statistics-challenges-and-outlook-for-e-retail-in-2022

3 www.statista.com/statistics/286384/internet-share-of-retail-sales-monthly-in-the-united-kingdom-uk

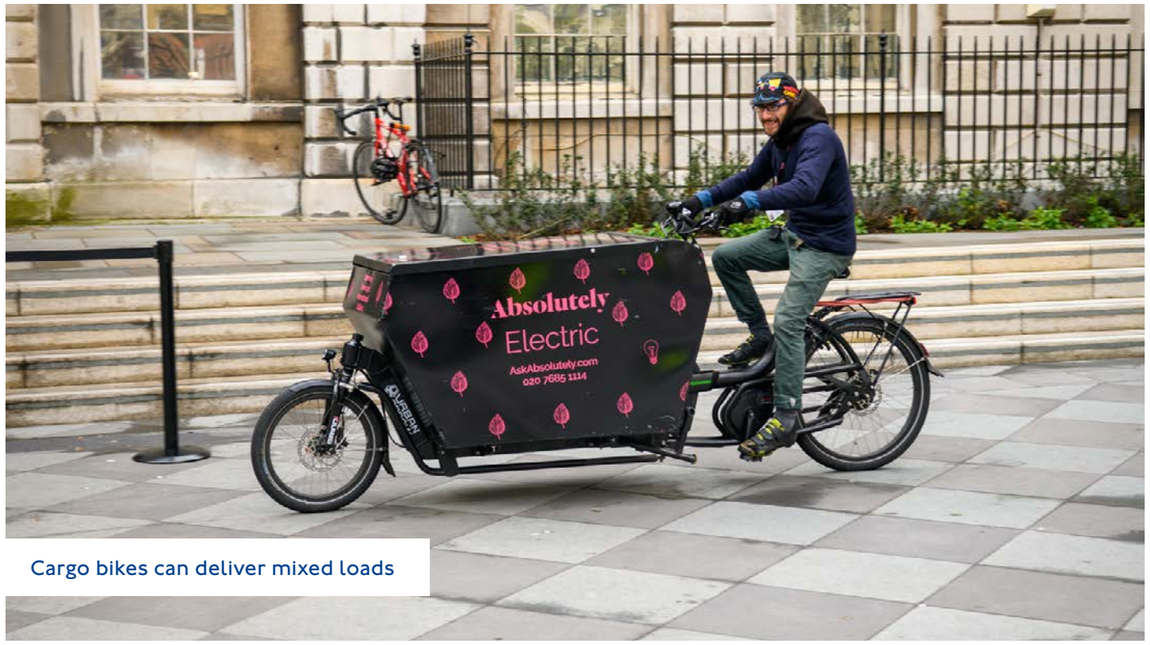
Examples of cargo bike schemes

- The Horizon 2020 project, Sharing Cities[3], worked with a local butcher in Greenwich to trial e-cargo bike deliveries. 95 per cent of these were deliveries under 5km[4]
- FM Conway, a construction firm, is using cargo bikes to distribute signs and supply light materials to the Hammersmith Bridge works site
- Royal Mail are using cargo bikes to deliver mail and parcels
- We are using e-cargo bikes to replace the batteries of our Santander Cycles e-bikes

Cargo bikes can also be a faster and cheaper alternative to vans. We trialled a trip made by a van and a cargo bike between North Greenwich and central London and the cargo bike arrived 15 minutes ahead of the van.

Local authorities have a crucial role to play in facilitating more sustainable freight through policy measures and their operational decisions that promote the transport of freight in urban areas. This support is valuable to position cargo bikes as a viable alternative to vans for local urban deliveries.

4 Mayor's Guide to Cargo Bikes, CityChangerCargoBike, Horizon 2020 project



Cargo bikes can deliver mixed loads

The bikes can be used for deliveries and services

Vision and key principles

Increasing the use of cargo bikes directly supports the Mayor's Transport Strategy

The Mayor's Transport Strategy aims for 80 per cent of trips in London to be made by walking, cycling and public transport by 2041. It also aims to reduce the number of lorries and vans entering central London in the morning peak by 10 per cent by 2026. The Mayor has announced an ambitious target for London to be net zero for carbon by 2030 to help tackle the climate emergency. These targets demand fewer and cleaner freight vehicles. Growing the number of delivery and servicing trips made by cargo bikes instead of vans also directly supports related policies such as the Ultra Low Emission Zone (ULEZ).

London Plan policies also encourage cargo bikes by calling for sufficient capacity for industry and logistics to be identified and protected, including for last-mile distribution[5]. Development plans, opportunity area plans and area action plans should also look to coordinate the provision of infrastructure and facilities at an area-wide level and to provide sustainable last-mile movements, including by cycle. Our Freight and servicing action plan supports the Mayor's Transport Strategy, Cycling action plan, Walking action plan and Vision Zero action plan. These plans are all aimed at making London more active, efficient and sustainable by transforming our streets. The Freight and servicing action plan states that we will work closely with our stakeholders to improve the efficiency of last-mile deliveries and servicing.

The updated Walking and Cycling London Plan Guidance[6] states that development plans should identify and make provision for current and future needs for cycling, including protecting and improving existing cycle routes and creating new strategic routes and local links. Plans should identify locations for cycling facilities such as cycle parking hubs, additional cycle land requirements and, where applicable, areas of potential expansion of London's cycle network.

5 London Plan Policy SD4 (A), and Policy T7 (F), Greater London Authority, 2021

6 Sustainable Transport, Walking and Cycling London Plan Guidance, December 2021

The bikes support the Mayor's target to be net zero by 2030

Other supporting policies include the Mayor's London Environment Strategy, which sets out how London can become a greener city by switching to lower emission vehicles.

Last-mile deliveries are currently dominated by vans, but cargo bikes are becoming increasingly viable for many types of deliveries and service applications. New delivery methods and evolving business models are extending the use of micromobility solutions as firms experiment with cleaner, more versatile, efficient modes and delivery channels. Cargo bikes are becoming an attractive and reliable solution for freight and other applications.

The scope of this document is limited to cargo bikes for commercial use and excludes domestic cargo bikes, e-bikes used for fast food delivery and other personal mobility devices such as e-scooters.

80%

of trips are to be made by walking, cycling or public transport by 2041

Green ticks show last-mile delivery modes in scope

Cargo bikes help to achieve the Mayor's Transport Strategy objectives by supporting Healthy Streets and other active travel policies, including the urgent need to reduce emissions and limit the worst effects of the climate emergency. They can operate in pedestrianised areas, Low Traffic Neighbourhoods and avoid heavy traffic by using London's safe cycling infrastructure.

We recognise that cargo bikes may not be suitable for some trips due to the nature of the load, distance travelled, or volume of goods delivered. They do, however, have an important role in last-mile and multimodal logistics chains. Our vision is to support further growth of cargo bikes to make them a leading option for last-mile freight and servicing trips in London.

Key principles:

- **Supporting Vision Zero:** Cargo bikes reduce the dominance of motor vehicles and make streets safer for active travel
- **Supporting environmental goals:** Cargo bikes support the goal of reducing carbon and toxic air pollution as a zero-emission solution for freight. They should be prioritised in scheme designs that impact traffic
- **Promoting mode shift**: The aim should be for cargo bikes to replace as many vans as practically possible
- **Improving accessibility:** Cargo bike infrastructure and utilisation should be physically accessible, available, easy to use and not impede or constrain people's movements on footways
- **Commercial viability:** Cargo bike solutions should be commercially sustainable over time and comparable to vans or as part of an integrated delivery channel

Our analysis

We have identified seven key factors that can be used to identify areas where cargo bikes could be a preferred mode of transport

Our research found a wide range of estimates for future cargo bike growth in the UK and London. As a result, it was necessary to develop a model that can estimate the potential for cargo bikes to replace van kilometres. Forecasts can identify areas where high growth is expected and provide input for future capacity planning.

The spatial model developed uses several data sources and applies weighted scores (between one and 10) to seven key factors at a Middle layer Super Output Area (MSOA)-level as listed below. MSOAs are geographic zones identified by the Census and each one has a population of between 5,000 to 15,000. There are just under 1,000 MSOAs in London.

The seven key factors, along with their weighting and scoring, have been influenced by the methodology and case studies used in our Cycle freight study. They are:

Employment and retail density

This factor considers the customer base that generates demand for deliveries. Scores range from one for primarily residential areas, to five for mixed-use areas with medium business density, to 10 for primarily retail or office dominated areas.

Cycle/vehicle permeability

Permeability affects the relative delivery speed and reliability of cycle freight compared to van deliveries. Areas with few vehicle access restrictions and no favourable cycle access routes scored lowest, while areas with high access restrictions and favourable cycle routes scored highest.

Levels of congestion

Uncongested areas scored lowest, indicating quicker travel times, and high congestion areas scored highest.

Presence of supportive policies

Areas with no specific enabling policies scored lowest and those with local schemes, for example Low Traffic Neighbourhoods, scored highest.

Presence of a cycle-friendly environment

Supporting cycle infrastructure was considered. Areas with no cycle lanes and low established cycle mode share scored lowest. Areas with segregated cycleways and higher cycle mode share scored highest.

Micromobility hub potential

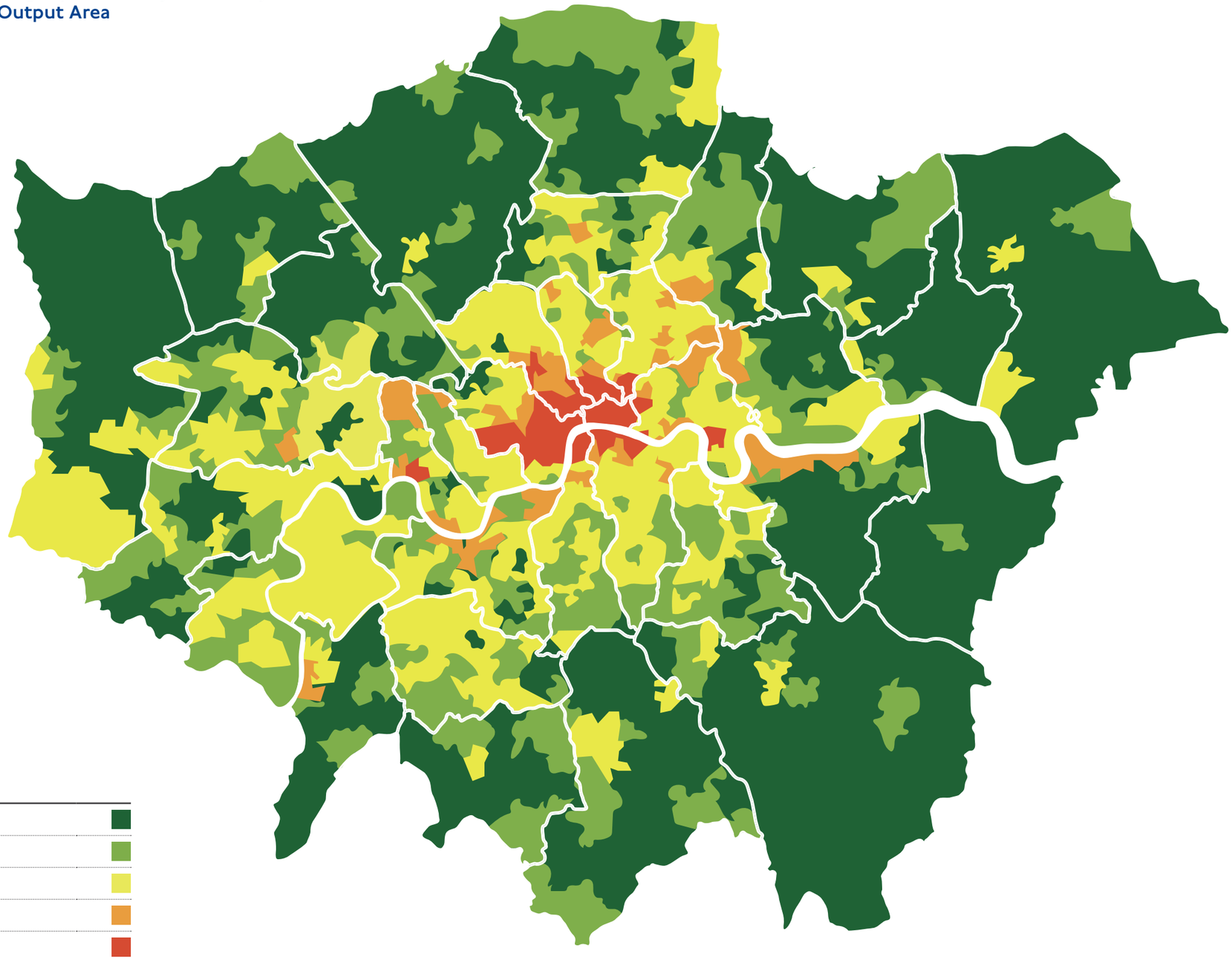
This factor indicates the quantity of suitable, available locations[7] that could provide space for storage such as public car parks, cycle hubs and our stations. Scores range from one (no suitable space) to 10 (plentiful suitable space).

Business profile

The presence of organisations and business support groups that support sustainable deliveries, for example Business Improvement Districts (BIDs), is likely to result in stronger cargo bike support. Areas without BIDs and suitable businesses scored lowest while areas with active BIDs, and businesses with high delivery potential, scored highest.

7 The study 'The Potential for Urban Logistics Hubs in Central London, Cross River Partnership and Steer, 2020' reviews spaces in the City of London

Cycle freight potential by Middle layer Super Output Area



Key

Very low	
Low	
Medium	
High	
Very high	

Using the potential for cycle freight scores and the latest traffic forecasts and findings from the Cycle freight study, the model estimated a range of van kilometres displaced by cargo bikes across London by 2025 and 2030, depending on the level of enabling measures in place.

The map shows the spatial distribution of expected demand with high central London growth and pockets of higher growth in some town centres and other key destinations.

1–2%

of van kilometres London-wide are estimated to be replaced by cargo bikes by 2025

Up to

17%

of van kilometres in central London could be replaced by 2030

Challenges to growth

We have identified key challenges that businesses face when considering cargo bikes as a transport mode

Cargo bikes are an effective replacement for vans for many delivery and service types. Policy measures, procurement incentives and pilot schemes present opportunities to increase cargo bike uptake.

Our research and discussions with more than 40 BIDs, boroughs and operators identified a number of challenges:

- Operators are experienced in van operations and understand them better. Businesses unfamiliar with cargo bikes will need to be convinced that they are suitable, viable in the long-term and can meet their service needs
- As cargo bike activity is not separated from other cycle types in statistics, understanding and analysing their impact is more difficult
- Information on cargo bike schemes, practice can be challenging to find. Newer operators and those considering cargo bikes may not easily find the information they need
- Concerns about the personal safety of the rider, for example secluded areas, poor lighting and antisocial behaviour present barriers, especially for female riders. Aggressive and close passing by motorists on roads is another concern
- The initial outlay when procuring cargo bikes can be a barrier for smaller businesses. Help can be provided through funding schemes such as the eCargo Bike Grant Fund from the DfT, as well as ULEZ support offers, including exclusive offers available for recipients of the Mayor's £110 million scrappage scheme
- Cargo bikes require suitable infrastructure in the right places. This includes cycle lanes, parking and land for bike storage and goods handling. Land availability for micromobility hubs is key for cargo bike growth. Suitable and available last-mile land is in short supply in London

These findings are supported by other studies including the 2021 Cross River Partnership (CRP) study on cargo bikes schemes as a sustainable response to the coronavirus crisis. It looked at ways to address the shortage of industrial land for micromobility hubs and developed a database to show the location and characteristics of suitable land parcels. This action plan commits us to work with CRP and other stakeholders to address challenges affecting cargo bike growth and efficient operations.

Cargo bike schemes and support in London

Collaboration between us, the boroughs, businesses, support groups and the GLA can help overcome these challenges and make cargo bikes a viable transport option.

- In January 2018, the City of London Corporation launched a programme in partnership with cargo bike operator Zedify to give cargo bike access to Square Mile businesses
- The London Borough of Hackney launched a cargo bike share scheme in 2021 aimed at both commercial and non-commercial users. The public hire scheme has four docking stations, each with two e-bikes. The scheme has had good support and is funded by the Mayor's Air Quality Fund
- Team London Bridge Bikes for Business programme works with businesses in Southwark by matching operators and businesses and encouraging a switch to cargo bike deliveries
- We funded the Parcels not Pollution scheme in Hammersmith where a micromobility consolidation centre supports cargo bike deliveries. We also funded the Streatham BID electric cargo bike scheme for local deliveries
- As part of the Mayor's new £110m ULEZ scrappage scheme, which includes smaller businesses and charities, successful scrappage applicants will have access to exclusive discounts and promotions to switch to greener and cleaner forms of transport such a e-cargo or cargo bikes

Examples of cargo bike applications in London

Growth, infrastructure and capacity

Coordinated infrastructure provision is key to unlocking the potential of cargo bikes in London

Reducing van kilometres

We want to encourage a shift from van use to cargo bikes to help reduce carbon emissions

According to our model, which will be kept under review and updated as new data becomes available, it is estimated that there is potential for cargo bikes to replace between one and two per cent of van kilometres across Greater London by 2025, compared to 2021 figures. This figure could double by 2030. Central London shows the highest growth potential with a high-end estimate of 17 per cent of van kilometres replaced by 2030. Some areas in central London, such as the City of London, could reach up to 30 per cent of van kilometres being replaced by cargo bikes.

Potential van kilometres saved were used to calculate carbon savings showing that between 10,000 and 30,000 tonnes of CO_2 could be saved across London by 2030. This was calculated using an average diesel van's carbon emissions per kilometre, as the actual carbon emissions associated with individual road journeys will depend on a number of factors such as vehicle model, level of traffic and average speed. Accurate baseline data will help us to develop the forecast model further. Some work has already begun, including video counts at certain locations, but work to separate cargo bikes from other cycles is currently limited.

Action 1

We will monitor movement by cycle type to identify usage patterns and project future growth.

Improving our understanding of cargo bike movements and likely future volumes and flows will provide quality data inputs that can inform capacity and spatial planning. We will develop more detailed spatial models to show likely future demand. It will also enable us to assess at what level cargo bike activity could restrict or otherwise affect the attractiveness and safety of our cycle infrastructure.

Action 2

We will further develop the demand model to help us better understand where in London demand for cargo bikes is likely to be highest.

Cargo bikes are also being used in the construction sector

Cycle freight infrastructure

Streets, highways and cycling infrastructure need to accommodate the shape and size of cargo bikes

High-density residential areas and office blocks can attract several hundred deliveries a day and be served by many cargo bikes. Cargo bikes must also not be seen as a nuisance or hinderance to people walking and cycling. Cargo bike-friendly infrastructure includes cycle lanes, cycle parking and land as well as facilities supporting cargo bikes and micromobility consolidation. Cycle infrastructure should be accessible and design should improve access to the network for all Londoners, as set out in our Cycling action plan.

Cycle lanes allow cargo bikes to avoid congested urban roads. With 260km of cycle routes added in London since 2016, the capital's extensive cycle network is well positioned to support cargo bikes. The ongoing growth of cargo bikes and other cycles in London means future capacity needs to continue to be met as demand grows. Aggregate and peak capacity needs must be carefully considered. Cycle lanes can become crowded when cargo bikes and other cycles share the same space, particularly at peak times when commuting levels are highest.

Several factors need to be considered when planning future capacity and suitability. Cargo bikes are wider and longer, using 10cm to 20cm more width on a cycle lane compared to other cycles. They are about 1.3 times the length of a regular bicycle and can be slower than other cycles which may affect the free flow of cycle traffic. Speed and size differences can impact the comfort and perceived safety of cargo bike riders and other cyclists.

Comfortable turning paths for cargo bikes, lane widths, gradients and physical barriers need to be factored into designs. Our London Cycling Design Standard considers these areas and should be consulted when planning cycle infrastructure. We will ensure that the guidance continues to support cargo bike specifications as these evolve over time.

Where narrow lanes are unavoidable, dropped kerbs or permeable separations are recommended where cargo bikes merge with motorised traffic[8]. Modal filters should also permit unobstructed access to cargo bikes.

8 The Cargo Bike Friendly City, A comprehensive guide to accommodating cargo bikes in cities, CycleLogistics, 2021

We need to prioritise accessible infrastructure for cargo bikes

Cycle parking

We need to plan parking areas that are easy to use and don't impact other transport modes

Pavements need to accommodate safe and convenient access for people walking and parked cargo bikes should not hinder their access. Boroughs should take a strategic view of the kerbside and opportunities to promote net zero targets by prioritising parking for clean vehicles including cargo bikes.

Providing cargo bike parking will encourage their use by giving them convenient spaces to park. This will also help to maintain a good reputation for cargo bikes and reduce the chance of cargo bikes clustering on pavements. Knowledge of clustering hotspots can provide information to support planning for capacity and new schemes.

Providing pavement parking spaces for cargo bikes at convenient locations will help limit unsuitable parking behaviour. Most existing dedicated cycle parking spaces are not suitable for larger cycles which require step-free access and room to manoeuvre the bike around a parking stand. Provision for cargo bike parking should be considered when residential and workplace parking plans are being developed. There are opportunities to review kerbside space currently allocated to cars, vans and HGVs.

Boroughs are aware of this need and are looking at ways to free up kerb space. Lambeth Council, for example, has set a target to allocate 25 per cent of car parking space to low carbon modes to help mitigate climate change[9].

There is considerable pressure on kerbside space from different user groups across London and especially in central London and local town centres. In line with the Mayor's Transport Strategy, the use of more sustainable modes should be prioritised where possible. A strategic approach to managing kerbside space is needed to avoid an uncoordinated patchwork of uses.

When planning and installing cargo bike parking the following should be considered:

- There are many different available sizes and configurations of cargo bikes. They could be similar in size to a normal cycle or not much smaller than a small van
- On-street spaces in the right places cause less conflict with pedestrians and are preferable to parking on a footway or pavement
- Spaces should accommodate ride-in-and-out in a forward motion where practical as this eliminates the need for reversing, turning or lifting a cycle
- In raised areas such as multi-storey buildings, there needs to be ramp or suitable lift access
- Spaces should look attractive on the street or outside shops and other buildings
- Cargo bikes and their cargoes are high-value items. Spaces should be located where they are a deterrent for thieves and should offer riders a sense of security when parking

25%

of car parking space allocated to low carbon modes as part of a Lambeth Council target

9 Lambeth Council Kerbside Strategy, January 2023

Stakeholder recommendation

We encourage boroughs to take a holistic approach to kerbside planning by prioritising those uses which contribute to net zero targets, their environmental policies and the Mayor's Transport Strategy. The provision for cargo bikes, including parking, will play a crucial role in this to ensure they make a positive contribution to the environment and don't present a barrier to other kerbside uses such as walking.

Action 3

We will continue to work with boroughs and developers to identify opportunities for short-stay parking facilities for bikes.

Micromobility hubs

Hubs can be used to store cargo bikes as well as for handling and storing goods before they are transported

Cargo bikes are well-suited to smaller, time-sensitive deliveries in dense urban and office locations. However, to maximise their effectiveness they need to be supported by micromobility hubs or consolidation points located in or around medium- to high-density areas to enable more people to use them. These areas provide a place to store the bikes as well as organise and distribute freight or services so that they can be transported.

Micromobility hubs can be mobile storage container units located in private or public spaces, parking garages or parking lots, or even in retail stores. These facilities can be temporary or permanent. For example, temporary spaces could include safe demolition sites and repurposed spaces such as former bus depots have been used to provide storage for goods and cargo bikes. Micromobility hubs can be integrated with other storage and transport functions. Repurposed retail space, railway arches and space in parking garages can be permanent or semi-permanent facilities.

Security, access to charging facilities, suitable truck access and flexible floorspace arrangements are important success factors for micromobility hubs. A footprint of around 200 square metres could support a number of cargo bikes. Truck access requires sufficient height clearance as well as suitable ramp provision. Depending on location, size and operating hours, rest and changing facilities may also need to be provided for riders.

Further work is required to establish minimum and desired features for micromobility hubs to support last-mile deliveries and cargo bike storage in London.

Action 4

We will work with industry to establish minimum and preferred micromobility hub specification profiles so that we can apply these to identify and target suitable sites for micromobility hubs.

Identifying suitable sites

We need to carefully identify and assess potential sites for micromobility hubs around London

A high-level review to identify sites for micromobility hubs on our estate showed that finding suitable sites can be challenging as data on characteristics and commitments is limited. Further work is needed to understand specific details for possible sites on our estate. Industry engagement and land use studies by CRP[10] and others have also found it challenging to identify and source suitable land.

A more detailed assessment is required to identify sites or collections of sites that can be made available for use as last-mile micromobility hubs on land owned by us or a third party. The London Plan supports new consolidation and distribution facilities for sustainable last-mile movements. To achieve this, we will develop a process to identify and test suitable sites to support hubs and cycle freight. We will also work with organisations that have under-utilised parking bays, empty retail space and areas that can easily be converted for use as micromobility hubs.

Careful design can make these facilities attractive, for example by obscuring cargo vehicles and handling activities from sight. Effective design can also support growth over time and provide a secure working environment. An example of this is the European Urban Mobility Design Initiative[11] that has developed several innovative design concepts for micromobility hubs.

Action 5

We will continue to work with the GLA and boroughs to develop a process that identifies, prioritises and evaluates opportunities to use land for micromobility hubs and last-mile freight.

10 https://crossriverpartnership.org/urban-logistics-hubs

11 EIT Urban Mobility, SMUD Project, KAVA 20036, Design of Shared Micro Depots, December 2020

River freight

River services can support last-mile cargo-bike deliveries as part of a multi-modal approach

A shift from road-based freight to rail and water and better integration between these modes provides further opportunities for cargo-bike last-mile deliveries. Successful ongoing and past trials in London have shown that there is potential to combine cargo bikes with water freight.

Action 6

We will work with operators, boroughs, BIDs and landowners to support multimodal trials and other initiatives that enable integrated logistics modes, including water and rail.

Combining water freight and cargo bikes

The courier service, DHL, runs a freight by water trial that uses cargo bikes for final leg deliveries from Bankside pier. This daily service brings light freight by water for onward delivery by cargo bike. Connecting micromobility solutions to support multimodal trips is becoming important for both last-mile freight and passenger trips.

Safety

It is crucial that we identify, understand and monitor any safety concerns around cargo bikes, riders and operators

Gathering data

With cargo bike data in short supply, we need to accumulate and analyse more data that is separate to other cycle types

The Mayor's Transport Strategy sets out a Vision Zero goal to eliminate all deaths and serious injuries from London's transport network by 2041 by having safe streets, safe vehicles, safe speeds and safe behaviours.

High-quality data is needed to identify action that will help eliminate casualties. Improved data and evidence will increase our understanding of cargo bike casualties and the factors contributing to them. Cargo bike specific collision statistics are not readily available as current statistical systems do not differentiate between cargo bikes and other cycle types. We encourage efforts, including by government, to record cargo bike casualty data separately from other cycle types.

Vision zero

goal is to eliminate all deaths and serious injuries by 2041

With the number of cargo bikes on London's roads growing rapidly, safety for cargo bike users and other people walking and cycling is a key consideration. We have identified four key safety areas: the bike, the rider, the operator and infrastructure. Having already outlined our suggestions for building suitable infrastructure for London's transport network, this section will focus on the other three areas.

Stakeholder recommendation

We encourage government and other highway authorities to improve the way cargo bike casualty data is recorded and analysed to better understand collision causes.

Data will help increase our understanding of cargo bike safety

We're keen to collaborate with others to tighten safety standards

The bike

We need to improve safety standard regulations for cargo bikes

Commercial cargo bikes are typically electrically assisted power cycles, with a maximum power output of 250 watts and maximum speed under power at 15.5km per hour. Higher-powered categories require type approval, must be registered and require a licenced driver. These categories include power up to 1,000kw (L1e-A classification) and three-wheeled vehicles up to 4,000w (L2e category).

Cargo bikes vary by type, dimension and application and can cost upward of £10,000 depending on how they are configured. Given the high cost of these units, security is important. Approved locks can deter criminals and tracker devices can bring recovery rates of up to 90 per cent[12]. Minimum equipment should include hydraulic, preferably disk brakes for safer stopping under load, a bull beam and brake lights. Some operators in London are also installing additional safety equipment, for example FM Conway have installed cameras and lone-worker safety devices.

Current safety standard regulation for cargo bikes is weak. For example, the standard applicable in the UK (DIN 79010) does not address heavy loads that are more than 300kg. Minimum safety standards are needed for commercial cycle freight operations in London. We will work with government and industry to establish minimum and best practice safety standards. At the same time, we will develop a London standard that adopts best safety practices. These standards may then be applied to safety schemes such as the Fleet Operator Recognition Scheme (FORS) and used in procurement contracts.

Action 7

We will develop a London safety standard for cargo bikes that adopts best practice.

12 The National Cycle Crime Conference, Bristol, 2022

The rider

Training is important for ensuring rider safety, with factors such as heavy loads impacting the way bikes behave

Riders need to account for the characteristics of their bike, especially when operating in mixed traffic areas. Riding cargo bikes requires training and practice, as factors such as load size and type can affect behaviour during riding and braking. Line of sight, balance, load security and stopping distances all need to be factored into how cargo bikes behave under load. Guidance needs to be provided on larger turning circles and impacts of the wind on cargo bikes with heavier loads.

> ‘We absolutely loved [the training]; it resulted in everyone becoming confident, competent and happy riders around the streets of London, whatever the payload’
>
> **Alex Woollacott**
> Sterling Landscapes

Training should also include understanding the specific operations and safety features of the cargo bikes that riders will be working with. Specialised training may be required for disabled or disadvantaged riders. Training and guidance are critically important to ensuring safe bike and cargo operations. Our engagement with industry and research carried out by Urban Health shows that the level of training varies from operator to operator[13]. Tiered training beyond basic skills is recommended to cope with the wide range of cycle types, operations and cargo types. Training providers should use qualified instructors and demonstrate their commitment to ongoing quality training and willingness to adopt benchmarks. Operators can also form training partnerships with experienced operators who offer this service.

We are in the process of reviewing our Constructor’s guide to cargo bikes and expanding it to include guidance for other sectors beyond construction. This will be available later this year and advises on procuring and operating cargo bikes, loading and securing cargoes and suggests recommended levels of training for riders.

13 Delivering good work: Labour, employment and wellbeing in London’s cargo bike sector, Urban Health, January 2023

Riders require training and guidance to be safe on the roads

The operator

Operators should ensure that riders are trained, safe and use proper equipment

Operators should provide protective equipment, proper training and ensure that loading and operating cargo bikes is safe and complies with Health and Safety Executive (HSE) guidance. Rider wellbeing is also important as riders often work in adverse weather and on challenging routes. Route risk assessments for new routes will enable operators to direct riders away from unsafe areas and routes. Access for disabled riders and those with specific needs should also be considered in route planning, for example avoiding dark and secluded sections.

Operators should ensure that equipment is suitable for the task, is properly maintained and that cargoes are properly loaded and secured. Minimum and best practice loading and operating standards for industry are recommended. Adopting best practice includes providing insurance for riders and encouraging positive rider behaviour that protects the reputation of cargo bikes, their operators and riders.

Rider safety is a very important consideration. Incidents of harassment, especially towards female riders have been reported by operators. Strategies such as the Mayor's Violence Against Women and Girls Strategy 2022-2025[14] that propose actions and support to reduce the prevalence of crimes against women and girls can inform best practice for operators. Access and inclusion should also be a key consideration when considering route accessibility during risk assessments. Appropriate signage, turning ratios, lighting, gradients and level of comfort should be considered to improve disabled riders' experiences. Parking for cargo bikes should also be conveniently sited, as set out in our annual Diversity and inclusion impact report (2019/20).

We have developed guidance to support cargo bike operators and riders. We will also develop operational guidance that covers safe operations, case studies on route risk assessments, information about loading and securing loads and relevant legislation and guidance for use of cargo bikes in the construction sector. This guidance is currently being reviewed, updated and extended to include other sectors.

Action 8

We will update and publish revised cargo bike safety guidance for operators and riders that provide advice on safety and operating practices for both riders and operators.

14 www.london.gov.uk/mopac-publications/mayors-violence-against-women-and-girls-strategy

Behaviour change

We need to work with other road users to shift perceptions, help procure bikes for communities and create shared spaces

Drivers supporting growth

We need to ensure that cargo bikes are viewed favourably by other road users

As more cargo bikes are seen across London, familiarity among other road users will increase and help to establish cycle freight as an easier choice for urban deliveries.

Several factors can support cargo bike growth and uptake. For example, funding schemes such as the DfT's e-cargo Bike Grant Scheme[15] can attract new operators. Also, encouraging cargo bike use in procurement contracts will encourage more operators to use them. Sharing cargo bike-related data and application platforms will allow for more efficient operations and establish cargo bikes as a leading option for last-mile deliveries.

Providing guidance, promotion, positive messaging and case studies could encourage more businesses to consider cargo bikes in their operations. We have already published a Cycle freight toolkit, aimed at businesses looking to use cargo bikes for their deliveries and collections. It provides advice and case studies that demonstrate the key steps for businesses to take to switch their deliveries to cargo bikes and is published on our website[16].

It is important that this growth is appropriately supported by local and transport authorities and that perceptions on the value of cargo bikes remains positive for operators and the public. We will continue to engage with the GLA, BIDs and boroughs to ensure that messaging about cargo bikes clearly demonstrates their advantages. We will engage with industry to promote and share best practice. We will also work with wider businesses to encourage a mindset change and promote cargo bikes as business as usual.

Action 9

We will continue to work with the GLA and boroughs to produce messaging and advice in support of cargo bikes.

15 This scheme is funded by the DfT and administered by the Energy Savings Trust

16 https://tfl.gov.uk/info-for/deliveries-in-london/delivering-efficiently/deliveries-toolkits#on-this-page-1

Familiarity will help establish cargo bikes as a leading last-mile delivery option

We are working to provide incentives to use cleaner vehicles

Effective procurement

Working with communities and businesses to use procurement as a way to increase cargo bike usage

We will continue to engage with the GLA, boroughs, other public bodies, BIDs and businesses on how we can use our procurement leverage to further increase cargo bike use.

Specifying the need to use zero-emission vehicles and minimum training standards in procurement contracts will provide incentives to use cleaner vehicles and to replace vans with cargo bikes and contribute towards zero carbon. We have been working closely with the GLA to deliver our commitment for all vehicles under 3.5 tonnes used for last-mile deliveries to the GLA's facilities to be zero emission by 2025.

Pilots and trials help organisations develop confidence in their operational capability and effectiveness. Many boroughs already have cargo bike trials under way and are making good progress towards establishing their use. Our toolkits provide useful information and advice for such trials.

Action 10

We will use procurement as a policy lever for suppliers to support sustainable last-mile deliveries and cargo bikes.

Stakeholder recommendation

We encourage boroughs to support the use of cargo bikes in their procurement policies.

Sharing spaces

The growth of cargo bike share schemes in boroughs shows they have strong support among local authorities

Boroughs should consider cargo bikes in local scheme designs to provide sufficient space for parking and include terms favouring cargo bike usage in their procurement contracts.

Space to store goods, park and access restrictions need to be planned for before they are used. Cargo bikes should be regarded as a preferred last-mile delivery option when planning for Low Traffic Neighbourhoods and borough-led vehicle emission-based schemes as they promote Healthy Streets through cleaner air and less pressure on traffic.

Action 11

We will promote cargo bikes as a preferred mode when planning TfL or supporting borough schemes, including Low Traffic Neighbourhoods and borough-led vehicle emissions-based schemes.

Planning spaces for goods and parking is essential to their success

Our commitments and next steps

We're eager to gain strong support from government and local authorities to help us encourage the uptake of cargo bikes

Planning for growth

Developing strong policies that encourage cargo bike growth is crucial to their success in the capital

Cargo bikes help to achieve the Mayor's Transport Strategy objectives by supporting active travel and reducing motorised traffic and road danger. Continued and strengthened support from government and local authorities can drive action to encourage the uptake of cargo bikes[17].

The government's Net Zero Strategy and the DfT's Decarbonisation plan highlight the important role that cargo bikes can play in decarbonising freight through modal shift and supporting the transformation of last-mile deliveries.

Designs and capabilities of cargo bikes are still evolving and operators are looking for more certainty on how different sizes and configurations may be viewed in regulation in the future. The DfT's 2019 Future Mobility Strategy[18] will look into implementing a flexible regulatory framework for micromobility vehicles. We will continue to monitor how micromobility developments may impact how and where cargo bikes operate.

The government drives national policy for micromobility, and we will work with them to develop policies that support the use of cargo bikes. Some specific areas that need to be considered in this process include:

- Improving enforcement and safety by identifying frequent offenders as not all cargo bikes display company information. There should be a way to link inconsiderate behaviour and offences back to an operator. This will highlight problem areas and enable operators to act to improve safe rider behaviour
- The increasing load capabilities available to electrically-assisted vehicles and other cargo bikes may result in a call by industry for heavier loads for cargo bikes to be permitted. Measures are needed to prevent over-size vehicles from using the cycle network. These could include restricting the number of wheels to limit over-size and weight configurations
- The current 250-watt limit applied to electrically assisted power cycles can be too low for larger, heavier pedal-assisted cargo bikes. New regulation for L-category vehicles could open up access to cycle lanes for these larger bikes, which are growing in popularity. This needs to be considered carefully and must not compromise the safety and comfort of other users of cycle lanes
- Speed limits under power-assist may be an option for certain high pedestrian traffic areas

Other local policies and regulations can further support cargo bike growth, for example by prioritising infrastructure access or limiting van and HGV access during certain times. Emission-based restrictions and congestion charging can also support cargo bike usage.

Stakeholder recommendation

We will collaborate with other urban transport authorities to encourage government to align and harmonise regulation across micromobility modes and provide clear direction in the face of rapidly developing technologies and modal options.

17 The Local Government Association has identified cargo bikes and micro-consolidation as key to decarbonisation: www.local.gov.uk/publications/future-last-mile-deliveries-understanding-local-perspective#executive-summary

18 Future of Mobility: Urban Strategy, DfT, March 2019

The way forward

We have identified a list of actions in three key focus areas to encourage the switch to cargo bikes

This plan sets out actions to promote cargo bike use and address barriers that limit or prevent a shift from vans to cargo bikes. Safe operations, sufficient and suitable capacity to support cargo bikes and best practice by operators, riders and other stakeholders will lead to growth, overcome barriers and increase support, making cargo bikes a leading option for last-mile deliveries. The three key areas of focus within this Cargo bike action plan are:

1. **Growth, infrastructure and capacity:** This considers specific requirements for cargo bikes and the impact that growth may have on cycle lane, kerbside and land use capacity

2. **Safety:** This considers the safety of bikes, riders and operators and addresses guidance and training

3. **Behaviour change:** This involves providing businesses with the tools and information they need to feel able to make the switch to cargo bikes

We have identified three ways to make the bikes a viable option

Expected timeline for the delivery of our actions

Action	Q2 (2023)	Q3 (2023)	Q4 (2023)	Q1 (2024)	Q2 (2024)	Q3 (2024)	Q4 (2024)	Later
Growth, infrastructure and capacity								
Monitor movement by cycle type	●	●	●					
Model to better understand demand growth			●	●	●	●		
Explore short-stay parking opportunities					●	●	●	
Establish minimum and preferred micromobility hub requirements		●	●					
Develop a process that enables TfL and public land for micromobility hubs		●	●	●	●	●	●	●
Continue to support integrated logistics trials, including water and rail	●	●	●	●	●	●	●	●
Cargo bike safety								
Develop a London safety standard for cargo bikes that adopts best practice		●	●	●	●	●	●	●
Update and publish cargo bike guidance for operators and riders	●	●	●	●				
Behaviour change								
Develop advice and messaging to support cargo bike benefits	●	●	●	●	●	●	●	●
Use procurement policy to support cargo bike uptake		●	●	●	●	●	●	
Cargo bikes as a preferred option in Low Traffic Neighbourhoods and vehicle emission-based schemes					●	●	●	●
Recommendations for stakeholders								
Boroughs to adopt a holistic approach to kerbside planning			●	●	●	●	●	●
Lobby government to improve cargo bike casualty data		●	●	●	●	●	●	●
Boroughs to support cargo bikes in procurement					●	●	●	●
Collaborate with and encourage government to harmonise regulation across micromobility modes								

About Transport for London (TfL)

Part of the Greater London Authority family led by Mayor of London Sadiq Khan, we are the integrated transport authority responsible for delivering the Mayor's aims for transport. We have a key role in shaping what life is like in London, helping to realise the Mayor's vision for a 'City for All Londoners' and helping to create a safer, fairer, greener, healthier and more prosperous city. The Mayor's Transport Strategy sets a target for 80 per cent of all journeys to be made by walking, cycling or using public transport by 2041. To make this a reality, we prioritise sustainability, health and the quality of people's experience in everything we do.

We run most of London's public transport services, including the London Underground, London Buses, the DLR, London Overground, Elizabeth line, London Trams, London River Services, London Dial-a-Ride, Victoria Coach Station, Santander Cycles and the IFS Cloud Cable Car. The experience, reliability and accessibility of these services is fundamental to Londoners' quality of life.

We manage the city's red route strategic roads and, through collaboration with the London boroughs, we are helping to shape the character of all London's streets. These are the places where Londoners travel, work, shop and socialise. Making them places for people to walk, cycle and spend time will reduce car dependency, improve air quality, revitalise town centres, boost businesses and connect communities. As part of this, our expanded Ultra Low Emission Zone and fleets of increasingly environmentally friendly and zero-emission buses are helping to tackle London's toxic air.

During the pandemic, we took a huge range of measures to ensure people were safe while travelling. This included extensive cleaning regimes across the public transport network and working with London's boroughs to introduce the Streetspace for London programme, which provided wider pavements and cycle lanes for people to walk and cycle safely and maintain social distancing. London's recovery is vital to the UK's recovery as life returns to normal. We want to ensure London avoids a car-led recovery and we continue to reassure people the capital and our transport network is safe and ready for them.

We have constructed many of London's most significant infrastructure projects in recent years, using transport to unlock much needed economic growth. This includes major projects like the extension of the Northern line to Battersea Power Station and Nine Elms in south London, as well as our work at Barking Riverside and the Bank station upgrade.

Working with the Government, we opened the Elizabeth line in time for Queen Elizabeth II's Jubilee. This transformational new railway adds 10 per cent to central London's rail capacity and supports the delivery of high-density, mixed-use developments, which are planned around active and sustainable travel to ensure London's growth is good growth. We also use our own land to provide thousands of new affordable homes and our own supply chain creates tens of thousands of jobs and apprenticeships across the country.

We are committed to being an employer that is fully representative of the community we serve, where everyone can realise their potential. Our aim is to be a fully inclusive employer, valuing and celebrating the diversity of our workforce to improve services for all Londoners.

We are constantly working to improve the city for everyone. This means using information, data and technology to make services intuitive and easy to use and doing all we can to make streets and transport services accessible to all. We reinvest every penny of our income to continually improve transport networks for the people who use them every day. None of this would be possible without the support of boroughs, communities and other partners who we work with to improve our services. By working together, we can create a better city as London's recovery from the pandemic continues.

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