

# Brixton Clean Air Freight Evaluation

Executive Summary

June 2023

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# Overview

Momentum Transport Consultancy (Momentum) was commissioned by Cross River Partnership (CRP) to evaluate the Brixton last mile logistics trial project. The trial was delivered with Pedal Me, a cargo bike operator, and funded by Impact on Urban Health.

This executive summary provides high level details on:

- The findings of the evaluation
- The outcomes of the project; and
- Future steps that could be taken to enhance uptake in last mile consolidation hubs that use cargo bikes for business deliveries.



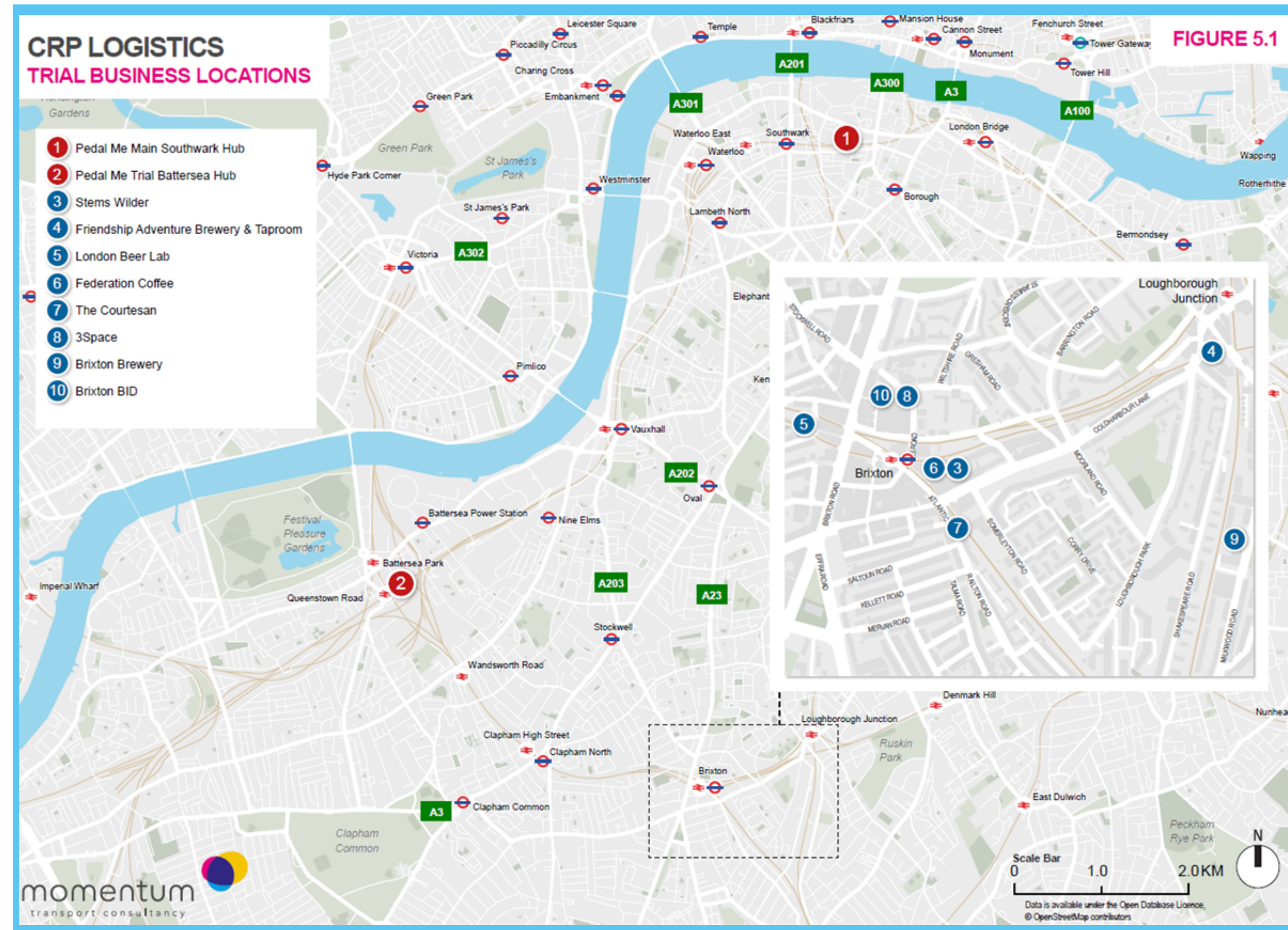
# About the Trial

The trial aimed to identify the possibilities and opportunities for last mile logistics hubs in urban centres. Operating between April 2022 and June 2023, the project offered Brixton businesses to trial free cargo bike deliveries from two last mile consolidation hubs; one located in Ewer Street (London Borough of Southwark) and the other in Battersea (London Borough of Wandsworth).

The trial aimed to reduce the air quality impacts of participating businesses deliveries by:

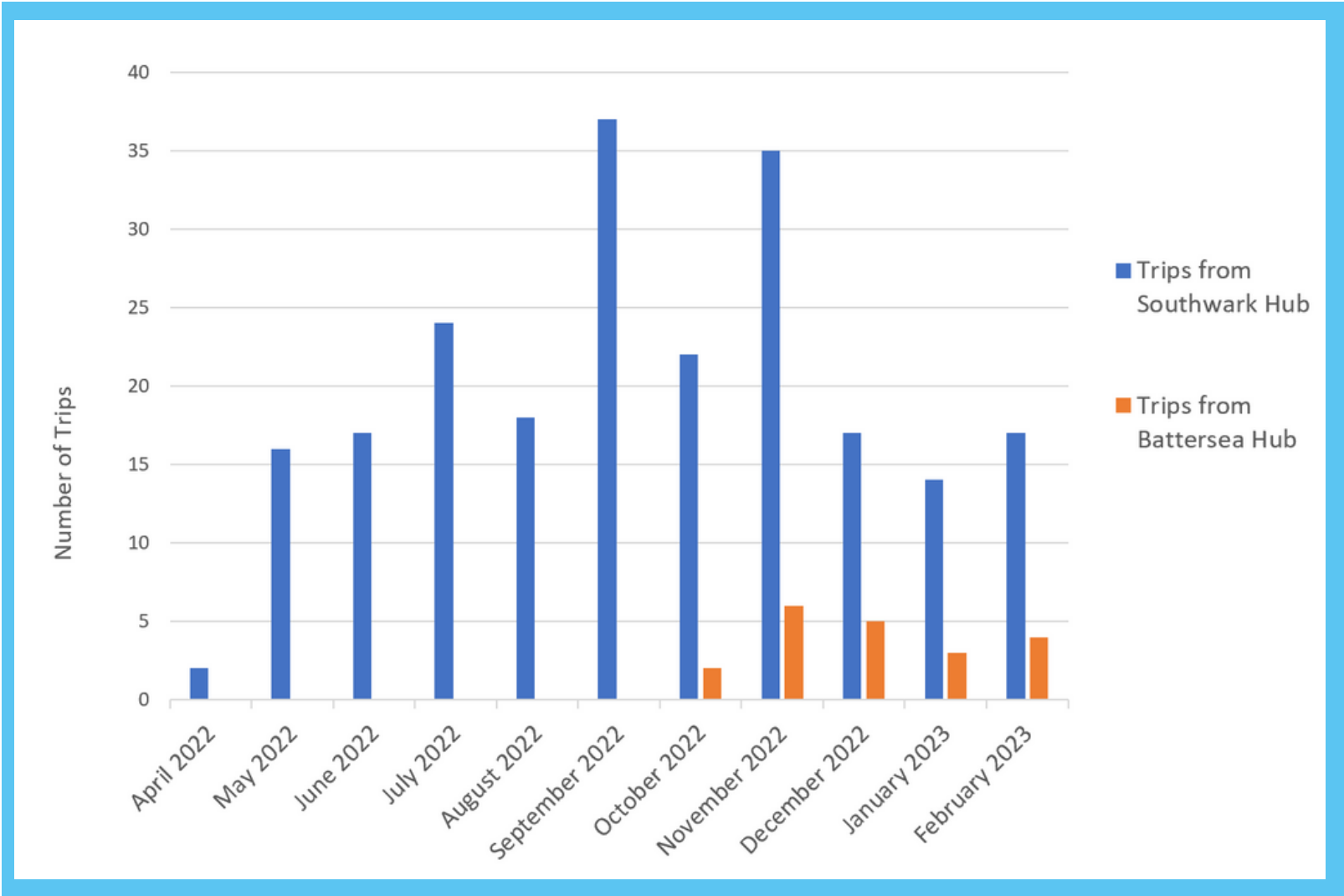
- Reducing the number of deliveries coming into central London
- Encouraging more deliveries by low emission modes such as cargo bikes.

Eight Brixton based businesses participated in the trial and these were: Stems Wilder, Friendship Adventure, London Beer Lab, Brixton Brewery, Federation Coffee, Brixton Bid, 3 Space and The Courtesan.



# Trips and Journeys

Overall, there were 194 trips made by cargo bike as part of the trial, between April 2022 and February 2023. A breakdown of trips by month and for each hub is shown on the chart below.



# Evaluation

To evaluate the trial, Momentum used both quantitative and qualitative data as indicated in the table below.

Findings from the evaluation showed that the consolidation hubs and last mile cargo bike deliveries enabled participating businesses to reduce their dependency on diesel van deliveries, and thus improved air pollution and reduced CO2 emissions.

Additionally, many of the businesses found that the trial enabled them to re-time and consolidate deliveries which also improved efficiency. Furthermore, the benefits from the scheme are highly scalable: the evaluation found that the benefits increase as more businesses take part in the scheme.

Quantitative Data	Qualitative Data
Data on the last mile deliveries, such as distance travelled, delivery dates and times were provided by Pedal Me	Surveys were completed by all the businesses who took part in the trial.
	Interviews were conducted with 3 of the participating businesses and with Pedal Me
	An engagement session with local residents

# Impact

Analysis indicated that approximately 277 motor vehicle-kilometres were saved as part of the trial. Based on this, and in comparison to the original diesel van delivery methods, the following estimated emissions savings were calculated: 109 kg of CO<sub>2</sub>, 75 g of NO<sub>x</sub> and 27 g of PM<sub>10</sub>.

Additionally, all eight participating businesses highlighted positive benefits from the scheme and – significantly - seven of the eight indicated they would like to continue using it in the future. The scheme enabled businesses to:

- Re-time deliveries to avoid overnight drop offs, saving some operational costs.
- Consolidate cargo to the hub for onward deliveries.
- Consolidate deliveries at the hub to “drip feed” smaller batches of goods to customers when needed, reducing the need for storage space at their own premises.
- Deliver “just in time”.
- Make more deliveries to their customers by cargo bike.
- Use the hub for additional storage space.
- Use the hub for reverse consolidation.

However, the trial also highlighted intricacies associated with each businesses’ operational requirements, and this influenced how they used the hub and the cargo bikes. Details on this are provided overleaf.

# Emissions Savings



**109 kilograms of CO<sub>2</sub>**

Using the Cross River Partnership’s Clean Air Tool, this equals the equivalent savings of...



**Emissions from 2 football-pitch sized forest fires**



**Heating for 12 homes for one day**



**The amount of CO<sub>2</sub> that 136 people exhale in one day**





The brewery 'Friendship Adventure' used the Southwark hub as a consolidation centre and a secondary base for operations. Cans of beer were delivered to the hub by cargo bike in bulk, before being stored and then delivered to their final destinations when required

(again this was done by cargo bike). This allowed Friendship Adventure to cut delivery costs and significantly reduce the number of vehicle trips that would have previously been required. Additionally, having stock nearer east and central London allowed them to reach customers more quickly.

Coffee Shop 'Federation Coffee' are not open outside standard business hours and close at 3pm. They benefited from the consolidation hub being open 24/7 as this meant their deliveries could reach central London outside peak times and allowed them to avoid missing any of their own deliveries.

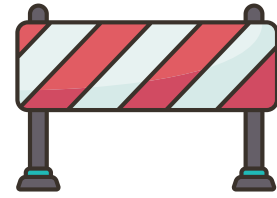


Florist 'Stems Wilder' asked their suppliers to drop off flowers overnight at the Southwark hub. These were then delivered the following morning by cargo bike to their shop in Brixton Village Market. This was a huge advantage for the owner as they no longer need to organise these deliveries, with the hub making it easier for them to schedule deliveries outside of peak hours.



The Courtesan, a restaurant and cocktail bar, noted that the deliveries made by the cargo bikes were more reliable than those previously made by van. Prior to the scheme, their vans suffered delays due to lack of drivers and traffic, and this resulted in failure rates between 5-10%. In comparison there were absolutely no issues associated with the cargo bike deliveries during their involvement in the scheme. This also meant that the number of missing / damaged items and time taken for deliveries decreased. Furthermore, the storage space at the hub allowed staff to free up space at the business and enabled them to make one large order of stock rather than multiple orders.

# Challenges



Although the service was free for businesses and widely promoted, several businesses quoted operational constraints or challenges as reasons why they couldn't make use of the trial. Out of the 180+ businesses that Cross River Partnership engaged with between April 2022 and February 2023, eight businesses were recruited to participate in the trial.

# Residents Views



As part of the evaluation, Lambeth and Southwark residents took part in a focus group to discuss their views on initiatives (such as the trial) to promote clean air deliveries. They had a very positive view on the trial itself, and were also very supportive of initiatives to consolidate deliveries and encourage cargo bike use – especially if this reduced large concentrations of lorry movements.

# Lessons Learnt

The trial demonstrated that there is huge potential for cargo bike consolidation schemes to be widely successful, and there is potential for significant upscaling of the scheme in the future.

However, support needs to be made available to encourage businesses to transition away from traditional fossil fuel based delivery methods towards consolidated deliveries and cargo bike use. Policies restricting the use of fossil fuel freight vehicles would help with this shift. Most logistics operators are unlikely to shift to micro mobility for the bulk of their deliveries, unless they are incentivised to do so. Additionally, current logistics infrastructure has been mostly based around fossil fuel vehicles and changes to the policy framework will be required to further encourage this shift.



# Recommendations

The policy framework should strongly encourage businesses and logistics providers to invest in cleaner deliveries. Policies that should be considered include the following:



- A new charging schedule for polluting vehicles in town centres and cities – this could be achieved through existing mechanisms (e.g. ULEZ), or preferably through smarter charging mechanisms (such as road user charging) to replace the current congestion charge. The Government and the Mayor of London should work to deliver this change.
- An increased focus on the retention (and where needed, expansion) of industrial land in strategic locations, especially near town centres. To achieve this, the Mayor of London and local authorities should designate additional industrial land as Strategic Industrial Land (SIL) or Locally Significant Industrial Sites (LSIS).
- Planning authorities should encourage clean air freight as a planning condition for new developments. As part of this they should ask applicants to put forward cargo bikes delivery strategies.
- Funding should be made available to local authorities or BIDs to promote clean air freight transitions. Long term (5-10 years) sustained funding should be provided for cargo bike schemes that can reach a significant proportion of local businesses. Economies of scale are vital in logistics, and these can only be achieved through co-operation of local businesses and groups.
- Subsidies and scrappage schemes for small businesses to trial cargo bikes can be highly effective. This would further promote the use of the bikes and, once new patterns are established, can become cost efficient for businesses who would no longer require subsidies. The Mayor of London should boost use of these schemes, which would also require Government funding (or the devolution of taxes, so the Mayor can raise this revenue themselves).
- Greater investment in clean air freight infrastructure. This could include (but is not limited to) Government investment in rail freight infrastructure upgrades and investment in river freight – especially upgraded dock space and encouraging the electrification of riverboats.

# Conclusion

Overall, the trial showed there is significant potential to consolidate business deliveries across an area and to switch to low-emissions modes for the last mile. This was seen through innovative logistics techniques used by the businesses involved.

Nevertheless, there are barriers to the expansion of consolidation schemes, which include the price of industrial land in central locations, current logistics systems and infrastructure, and a lack of support / information /incentives to encourage businesses to switch to cleaner last mile deliveries.

These issues will need to be addressed to unlock the potential that consolidation and cargo bikes can provide, and this will require organisation, long-term funding, and changes to the policy framework.



# Contact Us

**Ross Phillips (Sustainable Transport Project Manager):** [rossphillips@crossriverpartnership.org](mailto:rossphillips@crossriverpartnership.org)

**Isidora Rivera Vollmer (Project Manager):** [isidorariveravollmer@crossriverpartnership.org](mailto:isidorariveravollmer@crossriverpartnership.org)

**Susannah Wilks (Director):** [susannahwilks@crossriverpartnership.org](mailto:susannahwilks@crossriverpartnership.org)



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[crp@crossriverpartnership.org](mailto:crp@crossriverpartnership.org)



07966 201 695



@CrossRiverPship



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