6. SGL Kerbside Management Trial: Case Studies

6.4 London Borough of Richmond

6.4.1. SGL Kerbside Management Trial

LB Richmond took part in the Defra-funded SGL Kerbside Management Trial, delivered in partnership with Cross River Partnership (CRP) and Grid Smarter Cities (Grid). The trial provided LB Richmond with the opportunity to test Virtual Loading Bays (VLBs), a digitally-created dedicated space at the kerbside that can be pre-booked by participating operators to load and unload goods using the Grid Kerb booking platform.

6.4.2. Selecting a Location

LB Richmond focused on addressing congestion challenges around the key high street locations of Sheen Lane, Mortlake and The Quadrant, Richmond. The 1st VLB location was identified on The Quadrant to provide an alternative location to an existing loading bay frequently occupied by delivery drivers and to address local air quality issues identified in London Borough of Richmond's Air Quality Action Plan 2020-2025 , which were found to be in excess of 60µg/m3. Outside the Tesco Express store on Sheen Lane, Mortlake was identified as the 2nd VLB location. This helped to manage deliveries to the retail chain and address concerns raised by residents around HGV activities and congestion close to the railway crossing.

A 3rd location was identified at the southern end of Sheen Lane near the A205 junction and aimed to support deliveries to local businesses by opening up an underutilised section of highway.

The Quadrant VLB

VLB was located on The Quadrant, next to an existing loading bay, and focused on the servicing of businesses along the stretch of high street. The VLB was live between July 2024 to the end of December 2024 and was available to book Monday – Sunday, 07:00 – 23:00, with restrictions 08:00-10:00 and 16.30-18.30, to avoid peak hours.

Figure 56. The Quadrant VLB Location (green marker) in LB Richmond.

Figure 24. The Quadrant VLB. 34 The Quadrant, Richmond TW9 1DN

Sheen Lane (Tesco) VLB

VLB was located on Sheen Lane, Mortlake, outside Tesco Express, to primarily service the Tesco store. The VLB was live between July 2024 to the end of December 2024 and was available to book Monday – Sunday, 07:00 – 23:00.

Figure 25. Sheen Lane (Tesco) VLB. 39-41 Sheen Lane, London SW14 8AB

Figure 57. Sheen Lane (Tesco) VLB Location (green marker) in LB Richmond.

Sheen Lane (South) VLB

VLB was located on Sheen Lane, Mortlake, within a TfL bus stop area used by an infrequent bus service twice a week, and focused on the servicing of businesses at the southern end of Sheen Lane near the A205 junction.

The VLB was live between November 2024 to the end of March 2025* and was available to book Monday – Sunday, 07:00 – 23:00 (except 09:30 – 11:30 Tuesdays and Fridays as the bus arrives at 10:29 on these days). *Sheen Lane (South) VLB involving TfL was extended to the end of March 2025 due to the length of the VLB set-up process.

6.4.3. Traffic Orders & Permissions

When identifying suitable locations, LB Richmond identified that there was a borough-wide 20-minute loading restriction. An ETMO was required at the 3 locations to increase the maximum loading time from 20 to 40-minutes. As it was a London bus stop, TfL oversaw and granted permission for a VLB to be placed at this location. Careful monitoring arrangements for bay usage, dwell times and scheduling was required to manage any potential conflicts with local bus performance. Additionally, as vehicles other than buses are not permitted to stop in bus stops, a new sign needed to be approved to allow vehicles to load in this location within the permitted times. This process was undertaken with kind agreement of TfL.

6.4.4. Engagement & Communications

In-person engagement with businesses at the 3 locations was carried out throughout the trial. Informational flyers supported this engagement as well as targeted emails to businesses & suppliers. Grid's existing relationship with Tesco, who were already onboarded and using the platform at other Permit Loading Bay (PLB) locations in LB Southwark (outside of the SGL trial), led to the Tesco Reading and Dagenham depots booking the Sheen Lane (Tesco) VLB within the first month of the VLB going live.

Martin Brower was identified as a supplier to McDonalds during in-person business engagement with The Quadrant store who provided information on the Transport Manager. An in-person meeting with Martin Brower to provide information on the trial and answer queries led to successful onboarding and them becoming a regular user. Whilst engagement with the in-store teams for businesses along The Quadrant, including Greggs and Kokoro, provided information on current freight & servicing patterns, reaching the correct contacts responsible for fleet management proved challenging.

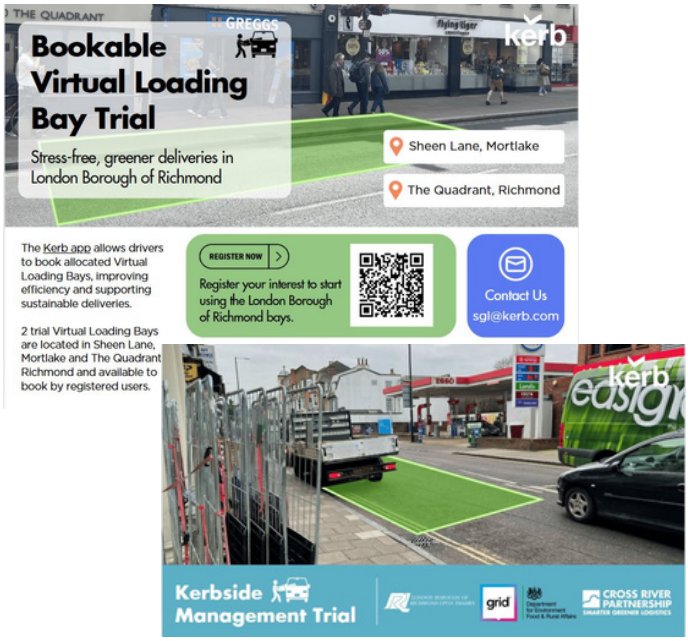

Figure 58. Communication materials used to promote VLBs in LB Richmond.

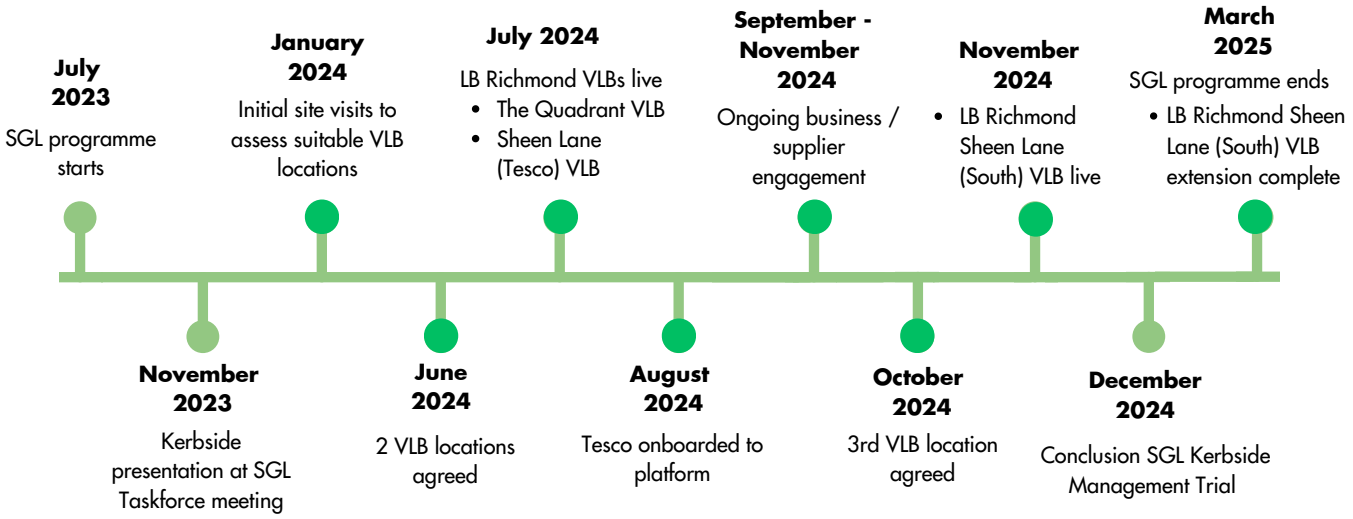

Figure 59. LB Richmond SGL Kerbside Management Trial Timeline

6.4.5. VLB Usage

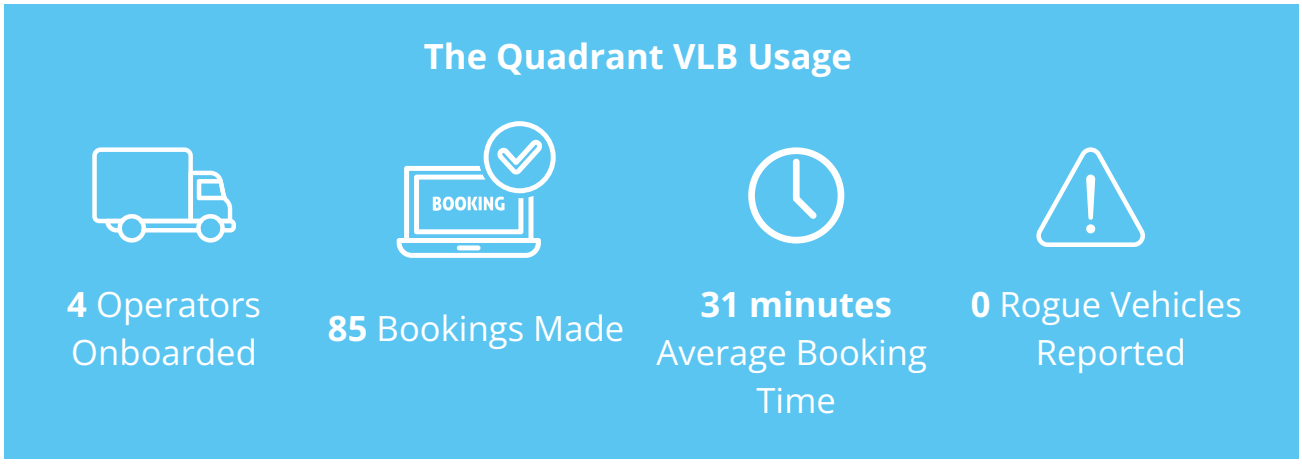

Figure 60. Overall Usage Figures - The Quadrant VLB

Martin Brower was the primary user of The Quadrant VLB and made regular bookings to service the McDonalds store multiple times a week. Ceva Logistics were engaged and onboarded to the platform, however, did not proceed to use the platform. The Sheen Lane (Tesco) VLB was used on a regular basis by both the Tesco Dagenham and Tesco Reading depot, averaging at around 10 bookings a week, and placing a total of 227 bookings – the highest of the trial. The Sheen Lane (South) VLB was live for a shorter period of time compared to the other 2 VLBs, however it was used regularly by Sheen Mobility from December 2024 onwards. The quantity of bookings made reflects the overall time the LB Richmond VLBs were live, and the frequency of bookings to supply supermarkets.

Figure 61. Overall Usage Figures - Sheen Lane (Tesco) VLB

6.4.6. Emissions Savings

Emissions savings were calculated using CRP's in-house Transport Emissions Calculator (TEC) which uses Defra's Emissions Factors Toolkit (EFT) to compare the emissions impact of different delivery methods and distances and the associated values for carbon dioxide, nitrous oxides and particulate matter. Data included delivery information provided at onboarding stage, total VLB bookings and estimates for the number of vehicle km saved as a result of the VLB providing a dedicated space for logistics activities. Further detail on emissions savings methodology and the assumptions applied are outlined in section 12.

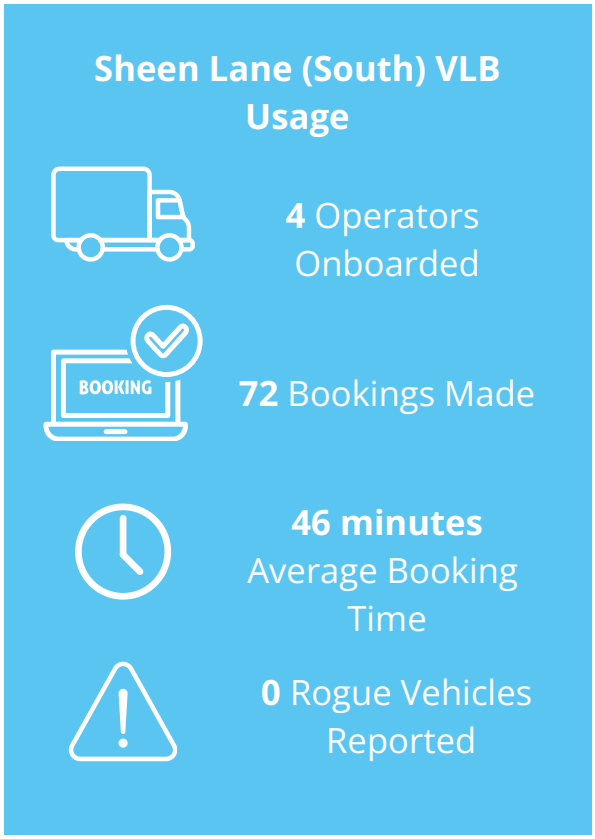

Figure 62. Overall Usage Figures - Sheen Lane (South) VLB

The Quadrant VLB

The Quadrant VLB was predominantly used by Martin Brower for frequent deliveries to the McDonalds store which resulted in the emissions savings outlined in Table 21.

Annual projections estimate that The Quadrant VLB has the potential to save 57.2km of vehicle circulation km per year, which could lead to estimated emissions savings of:

- 77.2g Nox
- 6.9g PM10
- 3.78g PM2.5
- 47.8kg CO2

These figures are based on the assumption of the trial continuing for a whole year and increased usage of the VLB based on the trial business/supplier engagement which identified suitable users and vehicle circulation km saved by providing a dedicated space for logistics activities. Onboarding of suppliers for Greggs and Flying Tiger, which both receive frequent deliveries, would enable emissions savings to be increased.

Sheen Lane (Tesco) VLB

Sheen Lane (Tesco) VLB was used on a frequent basis, multiple times throughout the week by Tesco depots resulting in the emissions savings outlined in Table 21. Annual projections estimate that Sheen Lane (Tesco) VLB has the potential to save 71.76km of vehicle circulation km per year, which could lead to estimated emissions savings of:

- 96.85g Nox
- 8.66g PM10
- 4.74g PM2.5
- 59.97kg CO2

These figures are based on the assumption of the trial continuing for a whole year and increased usage of the VLB based on the trial business/supplier engagement which identified suitable users and vehicle circulation km saved by providing a dedicated space for logistics activities. Onboarding of other suppliers to the Tesco store would increase VLB usage and achieve greater emissions savings.

Sheen Lane (South) VLB

Sheen Lane (South) VLB was used on a frequent basis by a single business throughout the trial period and was live for a smaller period of time (5 months) compared to the other 2 LB Richmond VLB, resulting in lower emissions savings (outlined in Table 21). Annual projections estimate that Sheen Lane (South) VLB has the potential to save 98.28km of vehicle circulation km per year, which could lead to estimated emissions savings of:

- 132.64g Nox
- 11.86g PM10
- 6.49g PM2.5
- 82.13kg CO2

These figures are based on the assumption of the trial continuing for a whole year and increased usage of the VLB based on the trial business/supplier engagement which identified suitable users and vehicle circulation km saved by providing a dedicated space for logistics activities. Further engagement is required with the independent businesses along the section of Sheen Lane and the onboarding of their suppliers to increase VLB usage and achieve greater emissions savings.

		During the SGL Kerbside Management Trial		Estimated Annual Projections	
Local Authority	**VLB Location**	**Estimated Vehicle Circulation km Savings**	**Estimated Emissions Savings**	**Estimated Vehicle Circulation km Savings**	**Estimated Emissions Savings**
London Borough of Richmond	The Quadrant VLB	4.4km	5.94g Nox 0.53g PM10 0.29g PM2.5 3.68kg CO2	57.2km	77.2g Nox 6.9g PM10 3.78g PM2.5 47.8kg CO2
	Sheen Lane (Tesco) VLB	4.8km	6.48g Nox 0.58g PM10 0.32g PM2.5 4.01kg CO2	71.76km	96.85g Nox 8.66g PM10 4.74g PM2.5 59.97kg CO2
	Sheen Lane (South) VLB	3.6km	4.86g Nox 0.43g PM10 0.24g PM2.5 3.01kg CO2	98.28km	132.64g Nox 11.86g PM10 6.49g PM2.5 82.13kg CO2
Total		**12.8km**	**17.28g Nox 1.54g PM10 0.85g PM2.5 10.7kg CO2**	**227.24km**	**306.69g Nox 27.42g PM10 15.01g PM2.5 189.9kg CO2**

Table 17. LB Richmond VLB Emissions Savings Estimates.

6.4.7. Learnings

- Sheen Lane (Tesco) VLB provided evidence on the specific time required by Tesco to carry out deliveries at the kerbside which does not currently align with the loading restrictions in-place.
- Testing of VLB technology provides evidence of LA action to address resident concerns around loading and congestion along Sheen Lane close to the level crossing.

Figure 63. Grid informational flyers promoting use of The Quadrant VLB in LB Richmond.

During the trial an Operator was onboarded but the business they supply did not place a delivery during the trial period so was unable to trial the platform.

- Richmond reflected on the smooth integration of the trial with internal processes and the importance of internal buy-in and frequent communication. The enforcement team primarily relied on email reporting as opposed to the use of the dashboard.

- Cost of platform would need to be considered against social, economic and environmental benefits of VLBs.

- 0 missed deliveries highlights that the Quadrant VLB provided an alternative location to the existing physical loading bay which was frequently occupied by delivery drivers.

- Trialling a VLB in an infrequently used (twice a week) TfL-owned bus stop area demonstrated the potential for dynamic management of the kerbside to meet unmet loading need whilst allowing the highways authority to manage the situation and give the logistics industry certainty about loading locations. However, this was a very unique and specific use-case, due to the bus stop only being used twice a week, and required additional signage and permissions, and therefore limits general applicability.

Figure 64. Sheen Lane (South) VLB being used to service the Tesco Express store (LB Richmond).

6.4.8. Trial Legacy

LB Richmond have extended the operations of their VLBs beyond the SGL programme and are working with Grid and local businesses / suppliers to increase existing VLB usage and identify other suitable VLB locations across the borough.

"Richmond Council are very grateful for the enthusiasm and dedicated leadership of the CRP team in uniting and engaging local businesses, their suppliers, Council departments and TfL to roll out 3 x VLB trials in East Sheen and Richmond town centres. This helped reduce congestion / emissions from double parking and from failed deliveries by better managing limited kerbside space. It also reduced complaints. The Council is looking to extend the VLBs throughout Richmond town centre and beyond."

London Borough of Richmond

Read the full **SGL Unpacked: Kerbside Management Trial** report for an in-depth evaluation of the trial including:

- Kerbside Management Technology
- Trial Set Up
- Engagement & Communications
- Case Studies
- Trial Insights & Data Analysis
- Trial Learnings
- Recommendations & Future Opportunities
- Next Steps

If you would like further information about anything that has been included in this case study, please get in touch:

crossriverpartnerhip.org

crp@crossriverpartnerhip.org

07966 201695

@CrossRiverPartnership

CRP YouTube Channel

CROSS RIVER PARTNERSHIP
SMARTER GREENER LOGISTICS

Department for Environment Food & Rural Affairs