

2024 Loading Survey Technical Note

Client name
City of Edinburgh Council

Project name
Meadows to George Street

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Revision History

Revision	Revision date	Details	Authorised	Name	Position
1	23 January 2026	Final issue	[REDACTED]	[REDACTED]	Regional Director

1. Introduction

The City of Edinburgh Council (CEC) is aiming to transform cycling, walking, public spaces and accessibility for all on some of Edinburgh's busiest and most iconic streets through the Meadows to George Street: Streets for People (MGS) project: Hanover Street, The Mound, Bank Street, George IV Bridge, Forrest Road, Bristo Place and Teviot Place.

Many of the streets contain business and retail frontage and the project must cater for their operational needs and there is a careful balance to be struck between the provision of loading and creating safe and high-quality spaces for people.

Part of the decision-making process included analysis of the provision of loading bays for each of the streets on the route to determine the locations and capacity requirements for businesses. Business engagement at previous stages had reached 57% of the 168 businesses on the route with a mixed level of feedback on their loading and servicing needs. As a result, a detailed video survey of the whole study area was completed late November 2019. To validate the previous survey results, a further loading and servicing survey was undertaken in April 2024.

This technical note summarises the two sets of 2019 and 2024 survey data, analysis and explains how the proposed capacity and timings of loading bays were obtained, per street along the corridor.

2. Traffic Operations

The traffic operation proposals for the project present several constraints in accessing particular streets and routes within the study area. An overview map of the proposals is shown below in Figure 1. In summary, the key factors which influence access for loading and servicing include:

1. Proposed bus-gate on Bank Street. This severs the main north-south through route for traffic with access restricted via the Mound when accessing from North; and George IV Bridge when accessing from South. The bus gate operational hours have been relaxed during off-peak durations where traffic capacity through the junctions is suffice. The operational hours of the bus gate are 6am to 10pm.
2. Forrest Road is proposed as a pedestrianised street with one-way access for loading in the northbound direction.
3. Proposed closures of Victoria Street, Lawnmarket and Cockburn Street under the City Centre Transformation Strategy.

In addition, existing traffic operations and restrictions were considered in the city centre area and nearby streets to identify opportunities to provide consistency on approach. This mainly includes:

1. High Street is restricted to access and loading from 6.30am to 10.30am.
2. Princes Street is restricted to access and loading from 8.00pm to 7.00am.

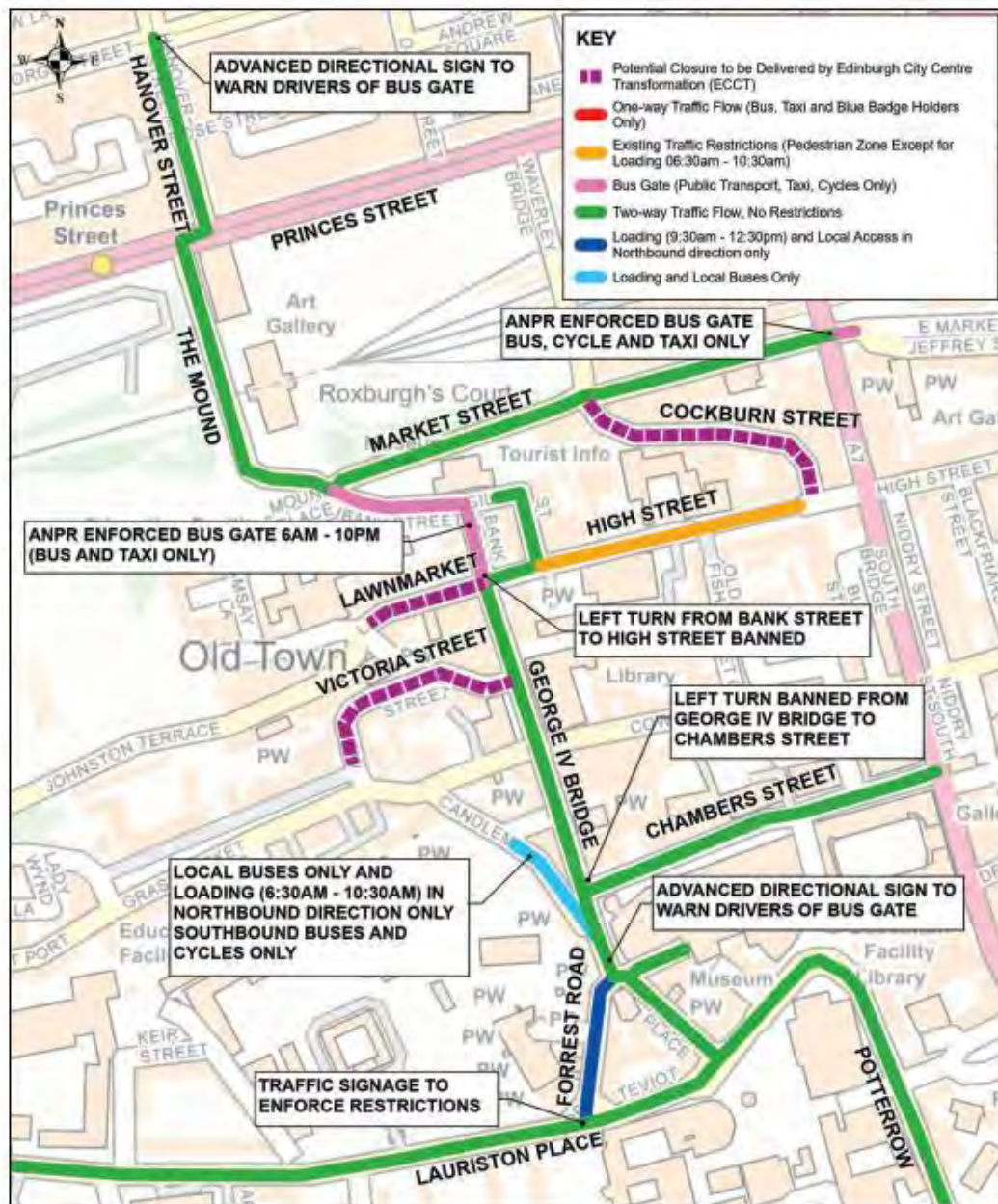


Figure 1: Traffic Operations Plan

3. Loading Survey Specifications

The 2024 video survey work was carried out by NDC during one full week, from the 21 March to the 27 March 2024. The locations were to be surveyed continuously, between the hours of 7am and 7pm, for the full week period. Observational data collection and recording were required across these full times.

The data collected included:

- Type of vehicle;
- Registration numbers (final three characters only)
- Duration of stay (including specified arrival time and departure time)
- Loading activity;
- Loading location.

3.1 Type of Vehicle

The types of vehicles used during the survey collection are as listed:

- Car;
- Light goods vehicle (LGV);
- Heavy Goods Vehicle (HGV);
- Bus/coach;
- Motorcycle;
- Moped;
- Pedal bike;
- Cargo bike;
- Taxi.
- Mini Coach

3.2 Loading Activity

The loading activity was described as follow:

- Delivery of goods;
- Loading of goods;
- Waste pick-up;
- Other as identified by surveyor.

3.3 Loading Location

The loading locations were described as

- Blue badge holder parking bay;
- Residential parking bays;
- Unrestricted parking;
- Loading bays (restriction + time)
- Bus stop;
- Taxi stance;
- Motorcycle bay;
- Any part of vehicle mounted on footway.

3.4 Video Surveys

Video surveys were carried out along the whole corridor and selected adjacent streets. The locations listed in section 3.5 were surveyed continuously, between the hours of 7am and 7pm, for the full week period.

3.5 Locations

All locations listed below include both sides of the carriageway and any loading located centrally on the carriageway. The survey does not consider off-street private car parks.

The locations surveyed are as follows:

- Hanover Street
- North Bank Street
- Bank Street
- King George V Bridge
- Bristo Place
- Teviot Place
- Forrest Road

4. Assumptions and Methodology

Length of loading bay

When considering the capacity and design of proposed loading bays, to determine the typical length of a loading bay the data was analysed to find out the most common loading vehicle that was used per street along the corridor. With that in mind, the average length of the loading vehicle was derived using typical lengths taken from CAD software. Figure 2 summarises the types of vehicles used, and Table 1 summarises the lengths and proposed averages used.

CAR & TAXI (CAR)	 SALOON	 ESTATE
	 PEOPLE CARRIER	 CAR TOWING CARAVAN/TRAILER
LIGHT GOODS VEHICLE (LGV)	 VAN	 <3.5 TONNES
		 PICK-UP
HEAVY GOODS VEHICLE (HGV)	 <3.5 TONNES	 2 AXLES RIGID
	 2 AXLES RIGID	 3 AXLES RIGID
	 4 OR MORE AXLES RIGID	 3 AXLES ARTIC
	 4 OR MORE AXLES ARTIC	 OTHER GOODS VEHICLE WITH TRAILER

Figure 2: Vehicle Types

Table 1 summarises the average lengths for each vehicle type.

Table 1: Average lengths for the different vehicle types

Vehicle Type		Average Length (m)	Vehicle name
Cars	Saloon	5.079	Large Car (2006)
	Estate	4.71	Estate Car (2006)
	People carrier	4.972	MPV (2006)
	Average	4.92	
Light Goods Vehicles	Van	4.39	Car Derived Van
	<3.5 tonnes	5.339	3.5t Panel Van
	Pick up	5.04	Pickup Truck
	Average	4.92	
Heavy Goods Vehicles	>3.5 tonnes		
	2 axle rigid	8.01	7.5t Box Van
	3 axle rigid	12	Rigid Truck
	4 or more axles rigid	15.4	Large Articulated Vehicle
	3 axles artic		
	4 or more axles artic	16.154	Low Loader
	max legal artic	16.5	Max Legal Length Artic
	Average	13.61	

The overall average length of the loading vehicles is 7.8 m. However, the loading data shows that a larger proportion of vehicles used for loading are LGVs, which have an average length of 4.92 m. It was thus decided to use an average vehicle length of 6.5 m to allow for manoeuvring and access for goods.

Loading Capacity

AECOM has been instructed by CEC to ensure we can still accommodate 100% of the peak daily loading demand.

Determination of the capacity and timings

The proposed capacity and timing of loading is specific per street section, but the methodology remains the same along the corridor.

Using the survey data, the following step-by-step approach was taken for each street:

1. Determine the peak day where there is the most loading happening, for each side of the street.
2. Sum of the total amount of vehicles loading in peak hour and retain 100% of that value.
3. Using the average loading bay length and the number proposed within concept design proposals, the number of vehicles that can load at any one time within the space during the peak hour is calculated.
4. The minimum loading time and therefore overall capacity is derived by taking 100% of total peak day capacity and dividing this by the number of bays proposed; this number is then multiplied by the average 10 or 15 minute loading operation.
5. Proposed timings of the loading restrictions were determined with view of the observed peak activity and coordination with other city centre streets and allowing suitable access and egress.

5. Results

5.1 Hanover Street

Table 2 shows that the peak day for loading along Hanover Street is a Wednesday, with a total of 57 instances.

Table 2: Average loading durations per side along Hanover Street (2024)

	Date	Avg Duration East (Min)	Count East	Avg Duration West (Min)	Count West
Monday	25/03/2024	00:09:14	20	00:09:32	20
Tuesday	26/03/2024	00:08:23	15	00:07:46	9
Wednesday	27/03/2024	00:08:25	31	00:13:24	26
Thursday	21/03/2024	00:18:46	12	00:07:57	14
Friday	22/03/2024	00:07:05	17	00:08:41	11
Saturday	23/03/2024	00:13:12	3	00:08:54	6
Sunday	24/03/2024	00:01:52	2	00:14:50	2

	Date	Avg Duration East (min)	Count East	Avg Duration West (min)	Count West
Monday	2019-11-25	15:20	21	16:26	17
Tuesday	2019-11-26	09:05	19	19:57	16
Wednesday	2019-11-27	11:34	18	12:10	17
Thursday	2019-11-28	11:17	23	10:53	19
Friday	2019-11-29	13:46	13	09:56	11
Saturday	2019-11-30	14:11	11	08:29	13
Sunday	2019-12-01	09:09	3	07:55	5

Figure 3: Average loading durations per side along Hanover Street (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey total the number of loading activities across the week has fallen slightly. The average duration for loading also appears to have decreased across the 7 day period.

The highest daily count has risen from 42 vehicles on a Thursday in 2019; to 57 vehicles on a Wednesday in 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week with the peak number of vehicles being 10 vehicles, on a given day and hour. The data comparison also indicates that the trend for loading days is still similar with peak days being during the week and weekends having minimal levels of loading activities being undertaken.

The following graphs on **Figure 4** show the hourly activity along Hanover Street for the 2024 survey data. It shows that there are 4 peaks during the week Monday at 10 am, Tuesday at 10am and 11am, Wednesday at 11am, and Thursday at 10am.

Figure 5 shows the hourly activity along Hanover Street for the 2019 survey data. It shows that during the peak day (Thursday), there are three peaks of loading: at 10am, 12pm and 2pm.

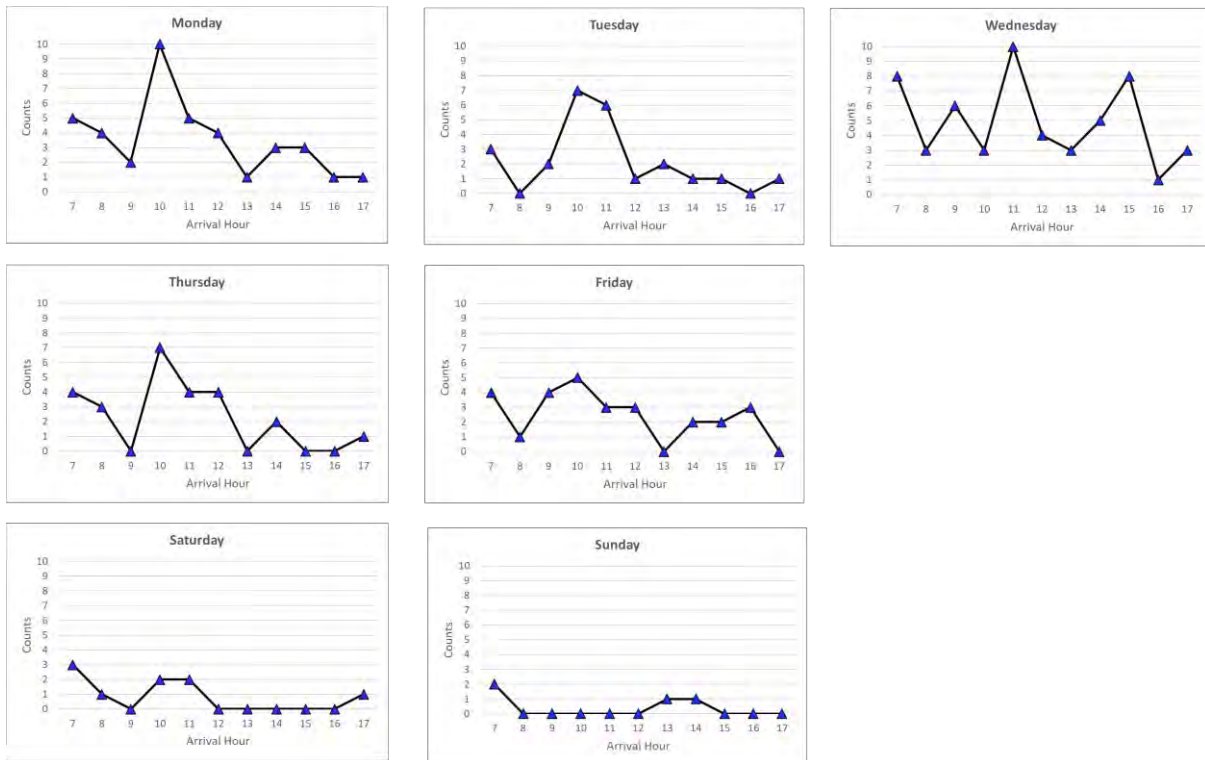


Figure 4: Hourly Activity along Hanover Street (2024)

Hourly Activity

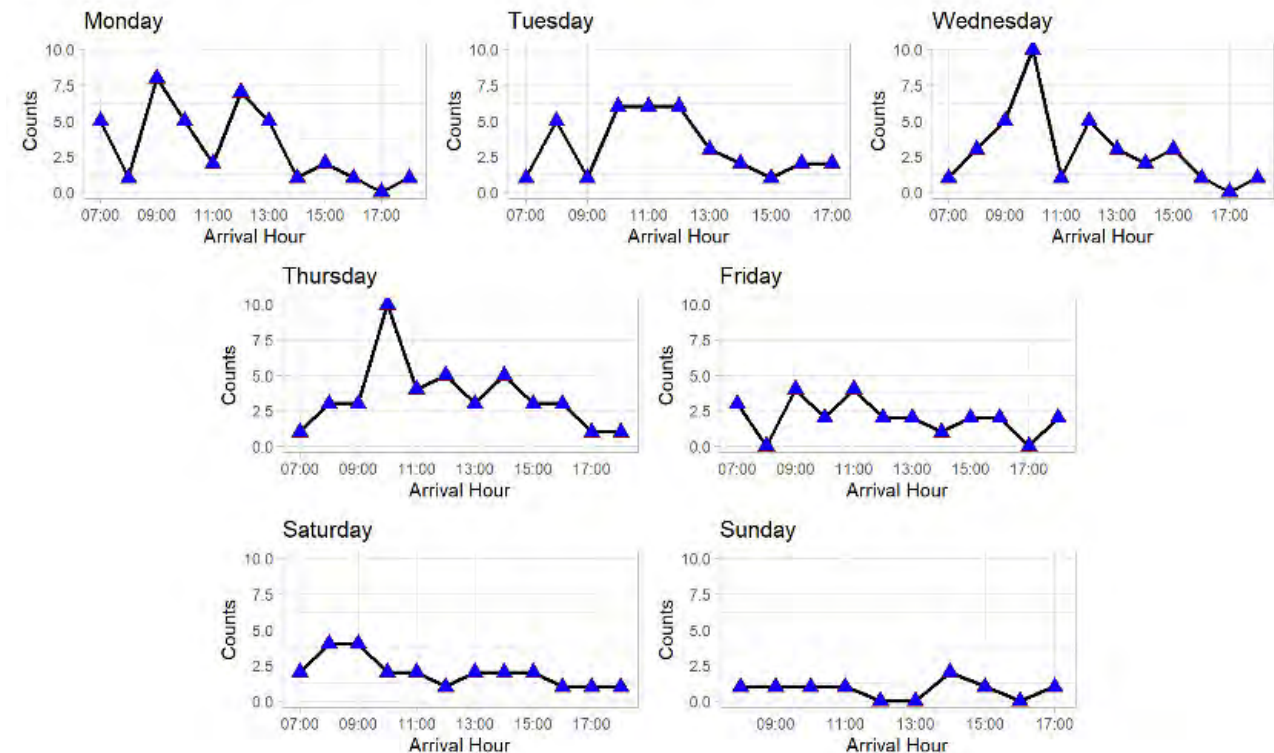


Figure 5: Hourly Activity along Hanover Street (2019)

Data vs Proposals

Two loading bays are proposed on Hanover Street on the north-east and south-west sides of the road. The timings of these bays are Monday to Sunday: 09:00-11:00, 14:00-15:00 and 23:00-07:00 and each with a loading bay length of 13m which accommodates two vehicles. Assuming an average duration of 10mins, the total capacity of vehicles per day of loading on Hanover Street equates to 72 vehicles during the daytime windows of 09:00-11:00, 14:00-15:00, excluding the

overnight period. This exceeds and provides a level of contingency for the observed peak demand of 57. The timings also cover the morning peaks of 09:00-11:00 which were observed.

5.2 North Bank Street

Observations show that most of the loading along North Bank Street takes place along the south side of the street, on single and double yellows.



Figure 6: Location of loading along North Bank Street

Table 3 shows that the peak day for loading along North Bank Street is Tuesday, with 24 instances.

Table 3: Average loading durations per side along North Bank Street (2024)

	Date	Avg Duration North (Min)	Count North	Avg Duration South (Min)	Count South
Monday	25/03/2024	N/A	0	00:10:10	20
Tuesday	26/03/2024	00:06:17	2	00:06:15	22
Wednesday	27/03/2024	N/A	0	00:06:30	21
Thursday	21/03/2024	N/A	0	00:06:48	16
Friday	22/03/2024	N/A	0	00:05:55	19
Saturday	23/03/2024	N/A	0	00:05:37	11
Sunday	24/03/2024	N/A	0	00:04:35	8

	Date	Avg Duration North (min)	Count North	Avg Duration South (min)	Count South
Monday	2019-11-25	06:33	2	08:42	14
Tuesday	2019-11-26	01:13	1	07:06	26
Wednesday	2019-11-27	03:52	5	10:34	22
Thursday	2019-11-28	03:35	2	10:26	28
Friday	2019-11-29	01:27	1	25:00	29
Saturday	2019-11-30	03:18	2	07:57	14
Sunday	2019-12-01	00:00	0	09:25	8

Figure 7: Average loading durations per side along North Bank Street (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey the number of loading activities across the week has fallen, most notably on the north kerbside with only Tuesday displaying loading activities. The south kerbside has seen an decrease in loading activity across each day apart from Monday. The activity durations have fallen slightly.

The peak number of total daily loading activities has decreased from 30 on a Friday in 2019; to 24 on a Tuesday 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week with the peak number being 8 vehicles, on a given day and hour. The data comparison also indicates that the trend for loading days is still similar with peak days being during the week with weekends having minimal levles of deliveries being undertaken.

The following graphs on **Figure 8** shows the hourly activity along North Bank Street for the 2024 survey data. It shows that there are 4 peaks during the week Tuesday at 9am and 10am, Wednesday at 10am, and Friday at 9am.

Figure 9 show the hourly activity along North Bank Street for the 2019 survey data. It shows that during the peak day (Friday), there are three peaks of loading: at 8am, 11am and 1pm.

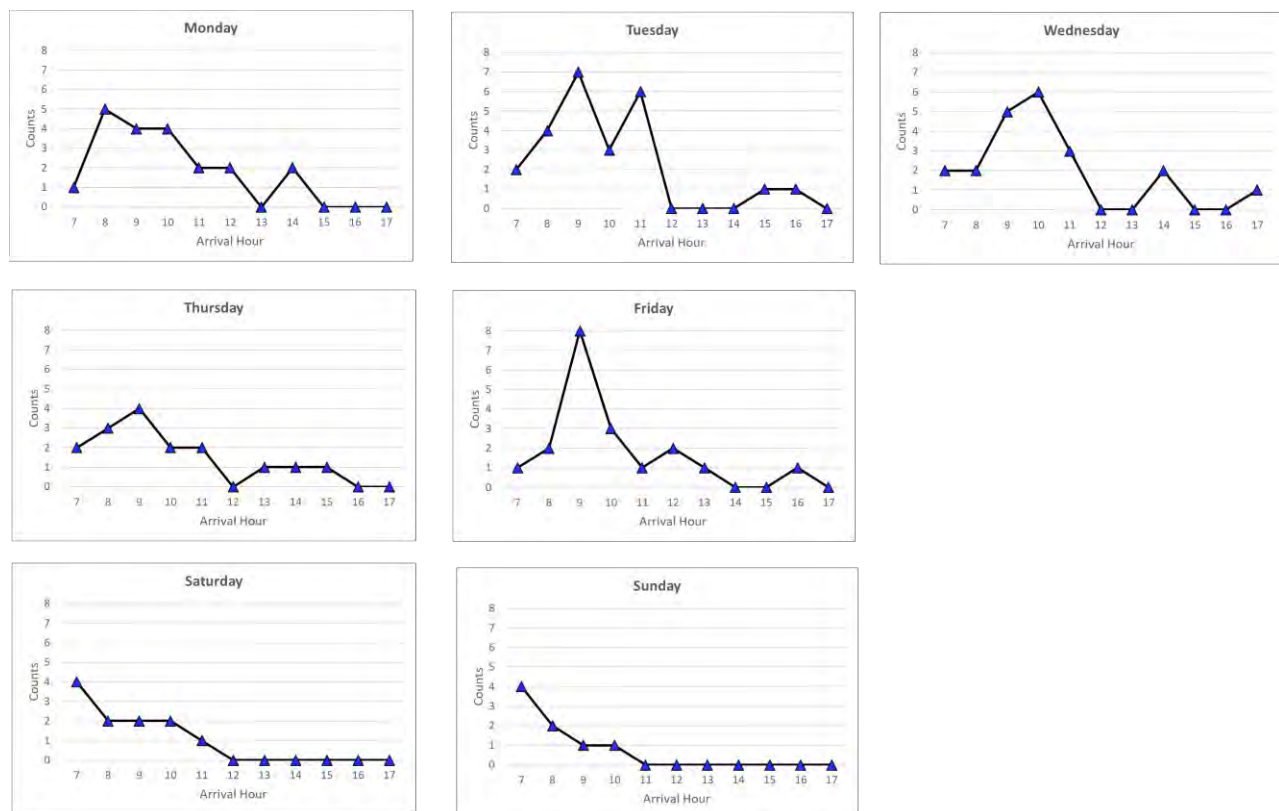


Figure 8: Hourly Activity along North Bank Street (2024)

Hourly Activity

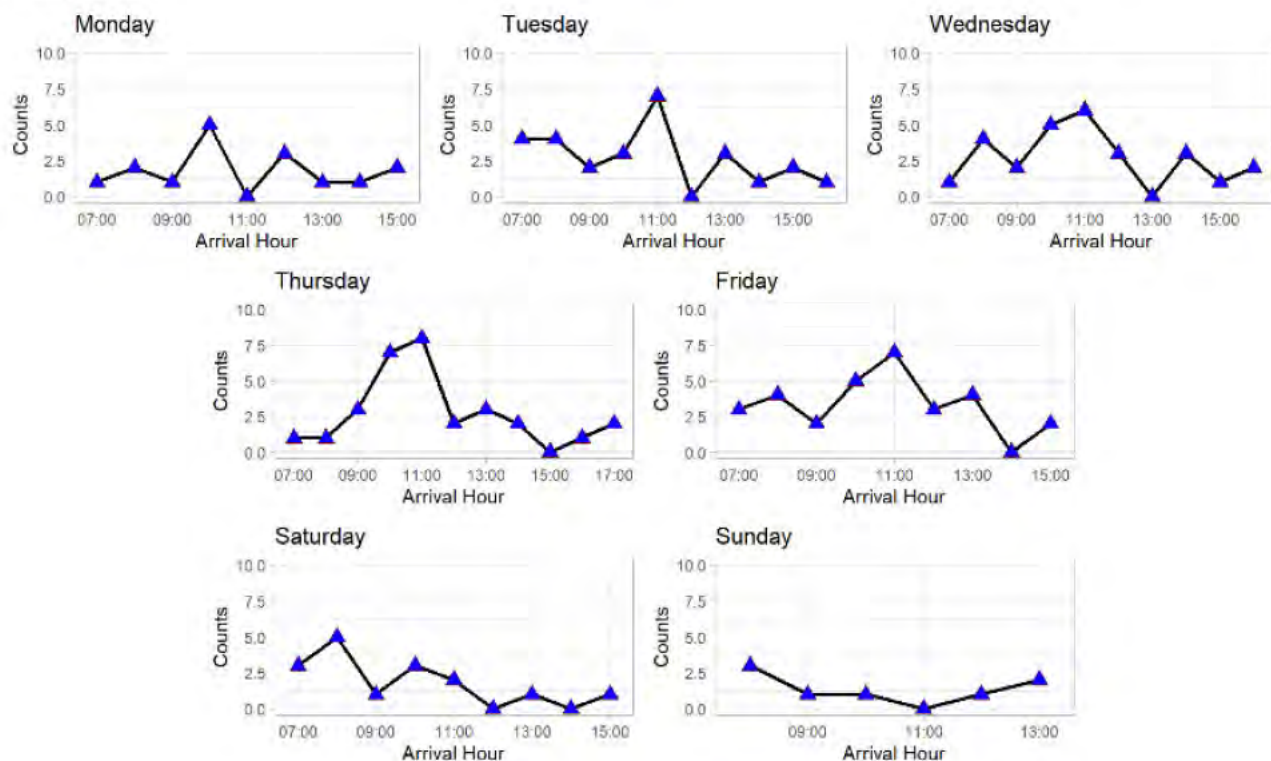


Figure 9: Hourly Activity along North Bank Street (2019)

Data vs Proposals

The current designs do not provide any loading along North Bank Street, however, a 13m loading bay is proposed nearby at Mound Place. Currently it is planned that these have no time restriction on loading and this would operate 24 hours. Assuming an average loading duration of 10mins, this equates to 288 daily vehicle capacity which exceeds and provides contingency against the observed demands.

5.3 Bank Street

Observations show that the majority of loading take place on the west kerbside of the street. Table 4 shows that the peak days for loading along Bank Street are Thursday and Monday, with 8 instances.

Table 4: Average loading durations per side along Bank Street (2024)

	Date	Avg Duration East (Min)	Count East	Avg Duration West (Min)	Count West
Monday	25/03/2024	N/A	0	00:10:42	8
Tuesday	26/03/2024	N/A	0	00:10:51	7
Wednesday	27/03/2024	N/A	0	00:09:08	6
Thursday	21/03/2024	N/A	0	00:11:17	8
Friday	22/03/2024	N/A	0	00:04:56	7
Saturday	23/03/2024	N/A	0	00:12:11	3
Sunday	24/03/2024	N/A	0	00:00:55	1

	Date	Avg Duration East (min)	Count East	Avg Duration West (min)	Count West
Monday	2019-11-25	06:13	1	10:12	13
Tuesday	2019-11-26	00:00	0	09:58	11
Wednesday	2019-11-27	00:00	0	08:54	17
Thursday	2019-11-28	00:00	0	08:27	13
Friday	2019-11-29	02:50	1	07:02	22
Saturday	2019-11-30	02:15	3	09:44	15
Sunday	2019-12-01	00:00	0	05:18	9

Figure 10: Average loading durations per side along Bank Street (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey the number of loading activities across the week has fallen substantially. Whilst the number of loading activities has decreased on the west kerbside the average loading activity duration has increased with exceptions of Friday and Sunday.

The daily peak volume of loading activities has fallen from 23 on a Friday in 2019; to 8 on a Monday and Wednesday in 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week, however the 2024 data shows the highest number of loading activities taking place during a given day and hour is 4 compared to 6. The data comparison also indicates that the trend for loading days is still similar to the data from 2019, with peak days being during the week with weekends having minimal levels of deliveries being undertaken.

The following graphs on **Figure 11** shows the hourly activity along Bank Street for the 2024 survey data. It shows that there is roughly one peak during the week Friday at 9am, with continuous low levels of loading activities during the rest of the week.

Figure 12 shows the hourly activity along Bank Street for the 2019 survey data. It shows that during the peak day (Friday), there are three peaks of loading: at 11am, 3 pm and 6pm.

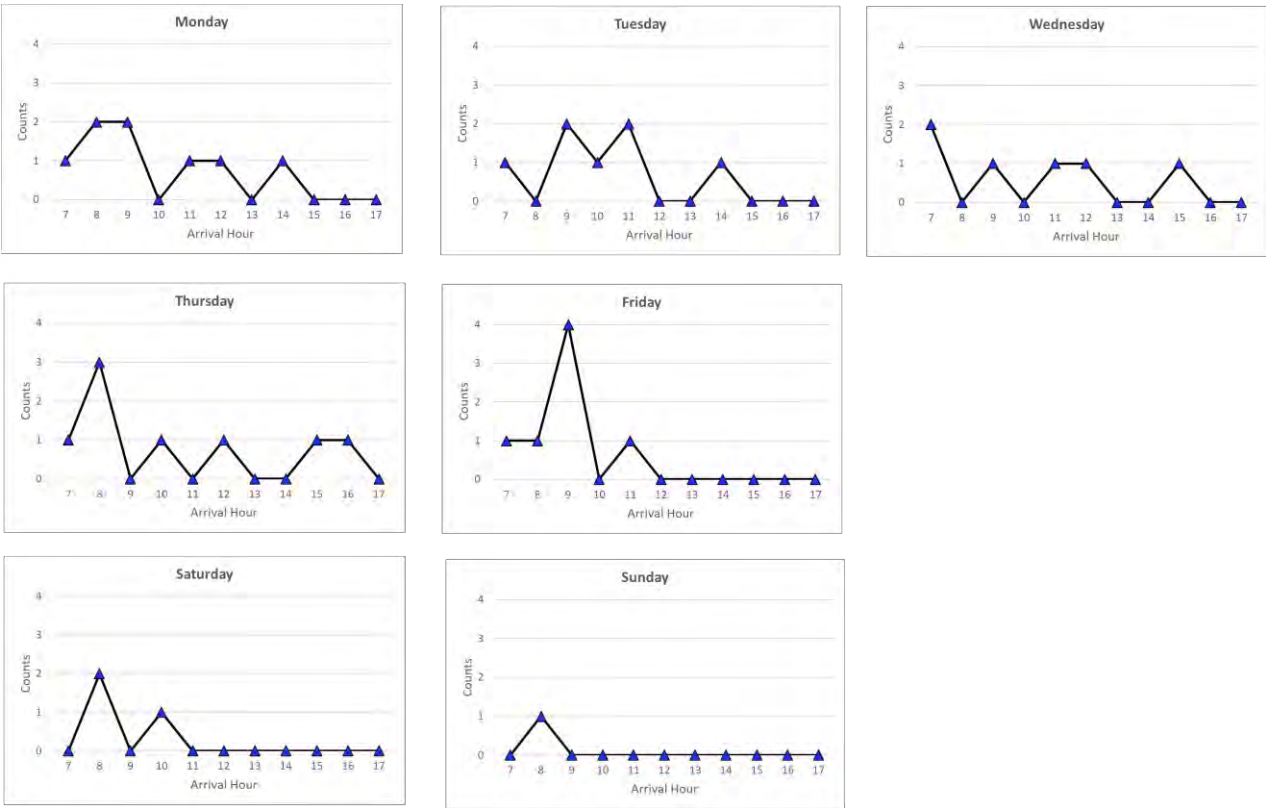


Figure 11: Hourly Activity along Bank Street (2024)

Hourly Activity

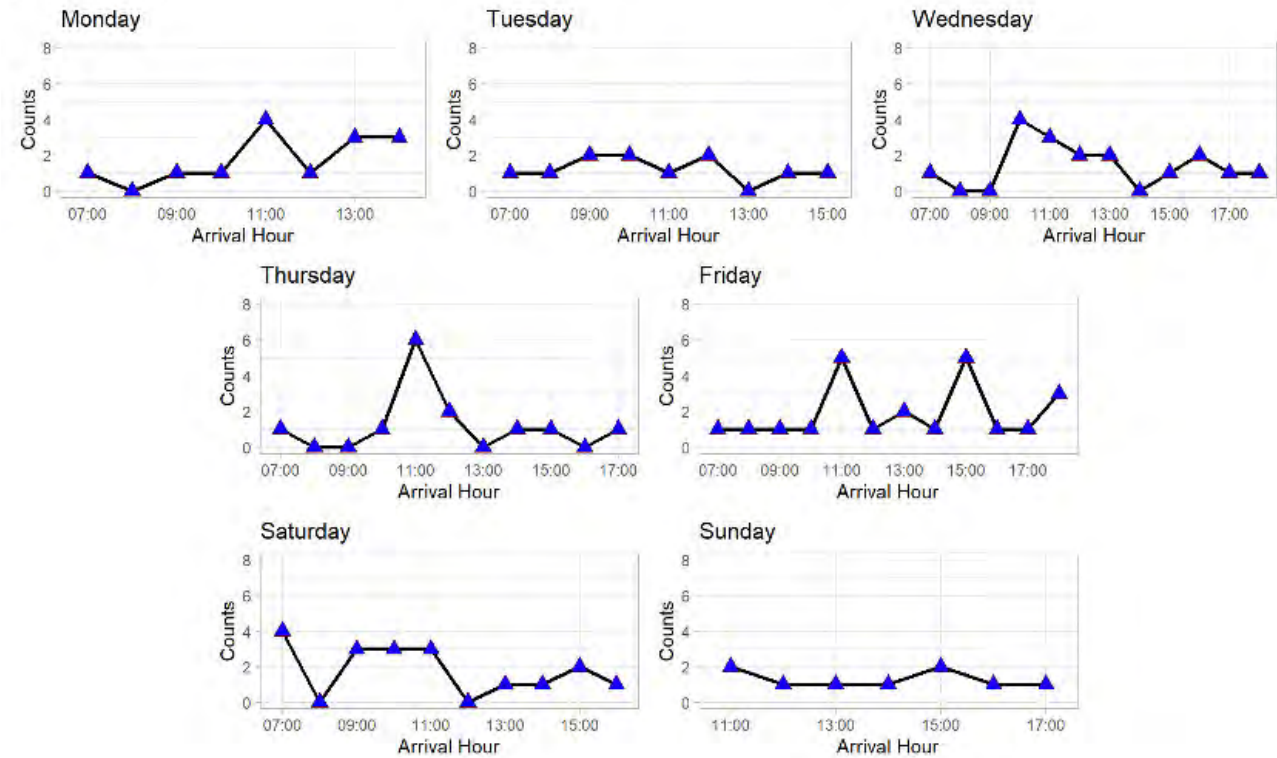


Figure 12: Hourly Activity along Bank Street (2019)

Data vs Proposals

A 13m long loading bay is proposed on the west side of Bank Street, which accommodates two vehicles. For vehicles to access the loading bay, they must be permitted through the bus gate. The proposed loading time on Bank Street is:
Monday to Sunday: 21:00-06:00.

Assuming an average duration of 10mins, the total capacity of vehicles per day of loading on Bank Street equates to 108 vehicles. This exceeds and provides a level of contingency for the observed peak demand of 8 vehicles.

5.4 George IV Bridge – North Section

Error! Reference source not found. Table 5 shows that the peak day for loading along the north section of George IV Bridge is Friday, with 9 instances.

Table 5: Average loading durations per side along the northern section of George IV Bridge (2024)

	Date	Avg Duration West (Min)	Count West	Avg Duration East (Min)	Count East
Monday	25/03/2024	00:09:43	2	00:09:50	6
Tuesday	26/03/2024	00:08:00	3	00:26:32	5
Wednesday	27/03/2024	00:03:20	4	00:10:38	3
Thursday	21/03/2024	00:04:38	3	00:07:58	5
Friday	22/03/2024	00:06:10	5	00:05:06	4
Saturday	23/03/2024	-	0	00:51:53	2
Sunday	24/03/2024	-	0	-	0

	Date	Avg Duration West (min)	Count West	Avg Duration East (min)	Count East
Monday	2019-11-25	08:51	16	04:39	7
Tuesday	2019-11-26	15:12	12	13:15	8
Wednesday	2019-11-27	09:45	12	21:23	7
Thursday	2019-11-28	15:28	10	07:47	6
Friday	2019-11-29	06:28	11	11:29	11
Saturday	2019-11-30	09:46	8	10:51	7
Sunday	2019-12-01	10:02	5	12:27	1

Figure 13: Average loading durations per side along the northern section of George IV Bridge (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey the number of loading activities across the week has fallen, most notably on the west kerbside – this is mostly due hotel refurbishment construction works traffic management which is in place. The east kerbside has also seen an decrease in loading activity across each day. In addition, the average duration of vehicles waiting has decreased across both the west and east kerbside, however on the east kerbside the 2024 survey data displays a long average loading duration on the Saturday which skews the averages.

The peak total daily volume of loading activity has fallen from 22 on a Friday in 2019; to 9 on a Friday in 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week, however the 2024 data shows the highest number of loading activities taking place during a given day and hour is 4 compared to 6. The data comparison also indicates that the trend for loading days is still similar with peak days being during the week with weekends having minimal levels of deliveries being undertaken, with Sunday now experiencing no loading activities.

The following graphs on **Figure 14** shows the hourly activity along George IV Bridge (North Section) for the 2024 survey data. It shows that during the peak day (Tuesday), there is a peak around 11am.

The following graphs on **Figure 15** show the hourly activity along George IV Bridge (North Section) for the 2019 survey data. It shows that during the peak day (Monday), there are two peaks of loading: at 10 and 11 am.

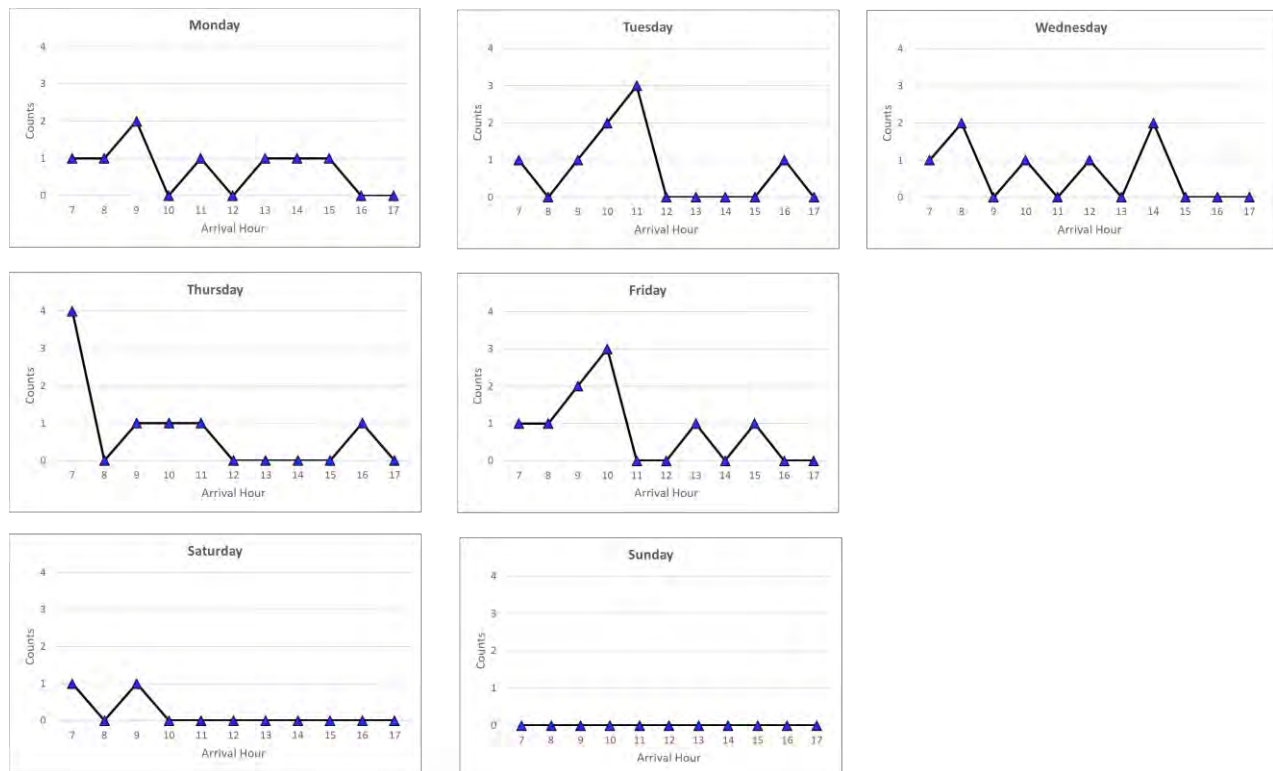


Figure 14: Hourly Activity along George IV Bridge (North Section 2024)

Hourly Activity

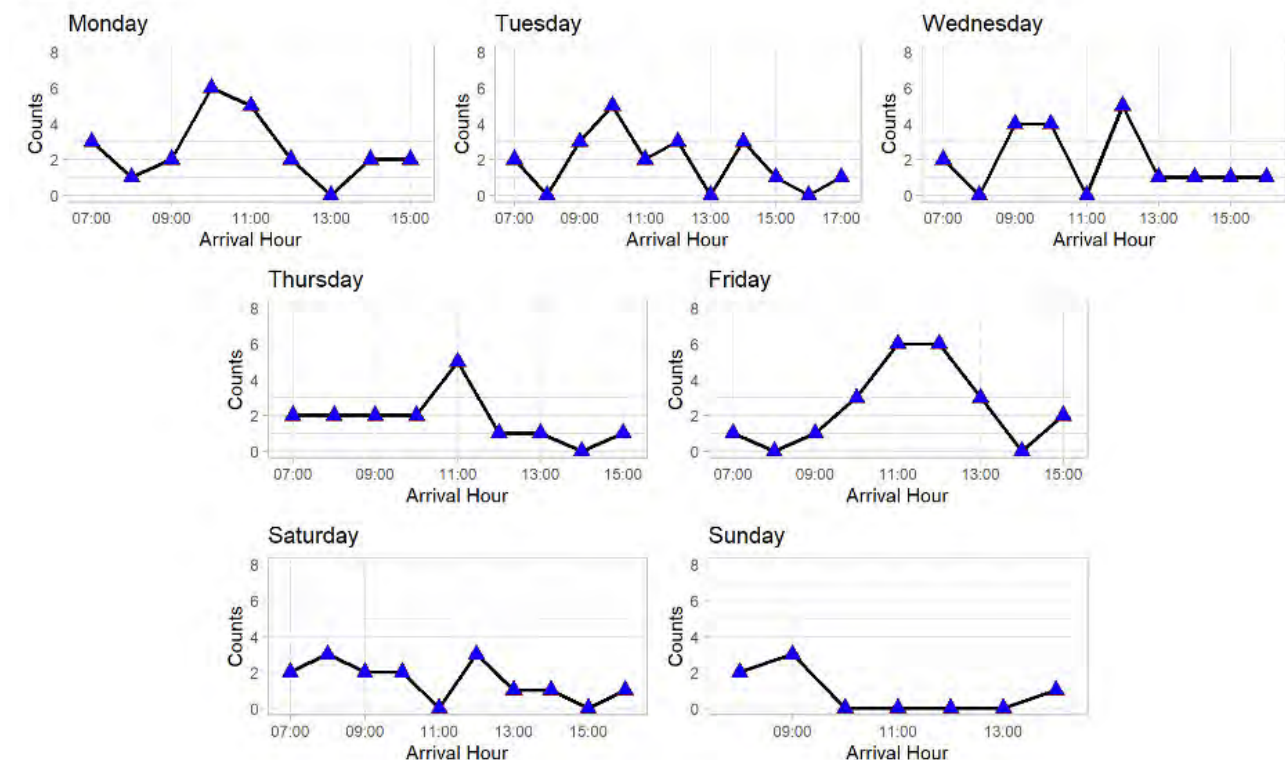


Figure 15: Hourly Activity along George IV Bridge (North Section 2019)

Data vs Proposals

A loading bay is proposed on the west side of George IV Bridge (north) with timings Monday to Sunday: 06:30 to 10:30 am with the taxi rank at all other times. The loading bay length is 26.4m which accommodates four vehicles. Assuming an average duration of 10mins, the total capacity of vehicles per day of loading is 96 vehicles. Acknowledging the 2024 data is suppressed due to building works, the peak demand from 2019 was 22 vehicles per day – of which the total

proposed capacity exceeds and provides a level of contingency. The timings also cover the morning peaks of 08:00-10:00 which were observed.

5.5 George IV Bridge – South Section

Table 6 shows that the peak days for loading along the south section of George IV Bridge are Tuesday, Wednesday and Friday, with 64, 65 and 69 instances respectively.

Table 6: Average loading durations per side along the southern section of George IV Bridge (2024)

	Date	Avg Duration West (Min)	Count West	Avg Duration East (Min)	Count East
Monday	25/03/2024	00:12:15	30	00:09:37	27
Tuesday	26/03/2024	00:13:49	30	00:08:35	34
Wednesday	27/03/2024	00:19:24	44	00:05:38	21
Thursday	21/03/2024	00:16:06	25	00:10:41	29
Friday	22/03/2024	00:14:27	43	00:10:00	26
Saturday	23/03/2024	00:09:00	23	00:06:11	17
Sunday	24/03/2024	00:14:30	17	00:02:50	13

	Date	Avg Duration West (min)	Count West	Avg Duration East (min)	Count East
Monday	2019-11-25	09:20	38	13:15	29
Tuesday	2019-11-26	06:54	37	13:45	38
Wednesday	2019-11-27	06:42	35	09:44	32
Thursday	2019-11-28	11:16	36	09:09	39
Friday	2019-11-29	11:40	39	07:21	36
Saturday	2019-11-30	06:57	25	18:05	18
Sunday	2019-12-01	07:27	14	21:29	10

Figure 16: Average loading durations per side along the southern section of George IV Bridge (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey the number of loading activities across the week has remained at similar levels to the 2019 data. However, activities on the east kerbside have fallen slightly when compared to the 2019 data. Over the 7 day period the number of activities has fallen on the east kerbside along with the average duration for loading activities. Notably the weekend loading durations has decreased significantly on the east kerbside.

The peak total daily loading activities have fallen from 75 on a Thursday / Friday in 2019; to 69 on a Friday in 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week, along with similar numbers of loading activities occurring. For example the highest number of loading activities taking place during a given day and hour is 16 which is similar to the 2019 data.

The following graphs on **Figure 17** shows the hourly activity along George IV Bridge (North Section) for the 2024 survey data. It shows that during the peak days (Wednesday, Thursday and Friday), there are peaks of loading between 8 and 11am.

The following graphs on **Figure 18** show the hourly activity along George IV Bridge (South Section). It shows that during the peak days (Tuesday, Thursday and Friday), there are peaks of loading between 9 and 11am.

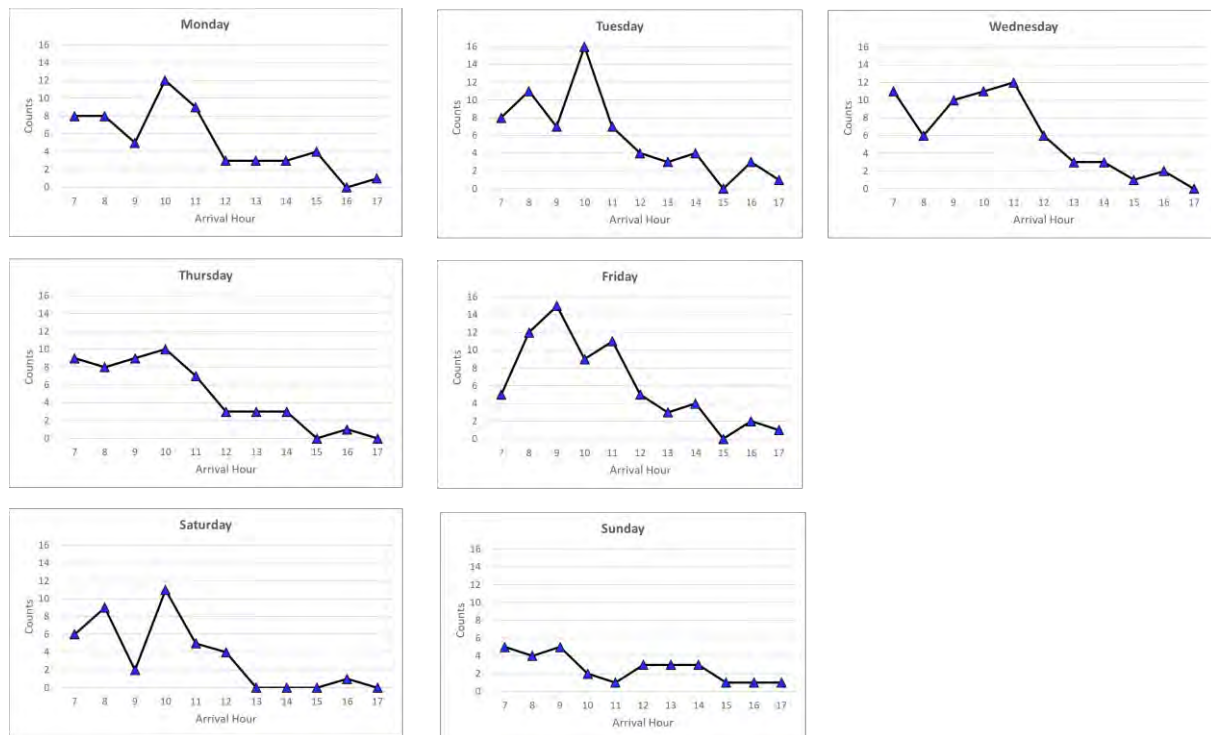


Figure 17: Hourly Activity along George IV Bridge (South Section 2024)

Hourly Activity

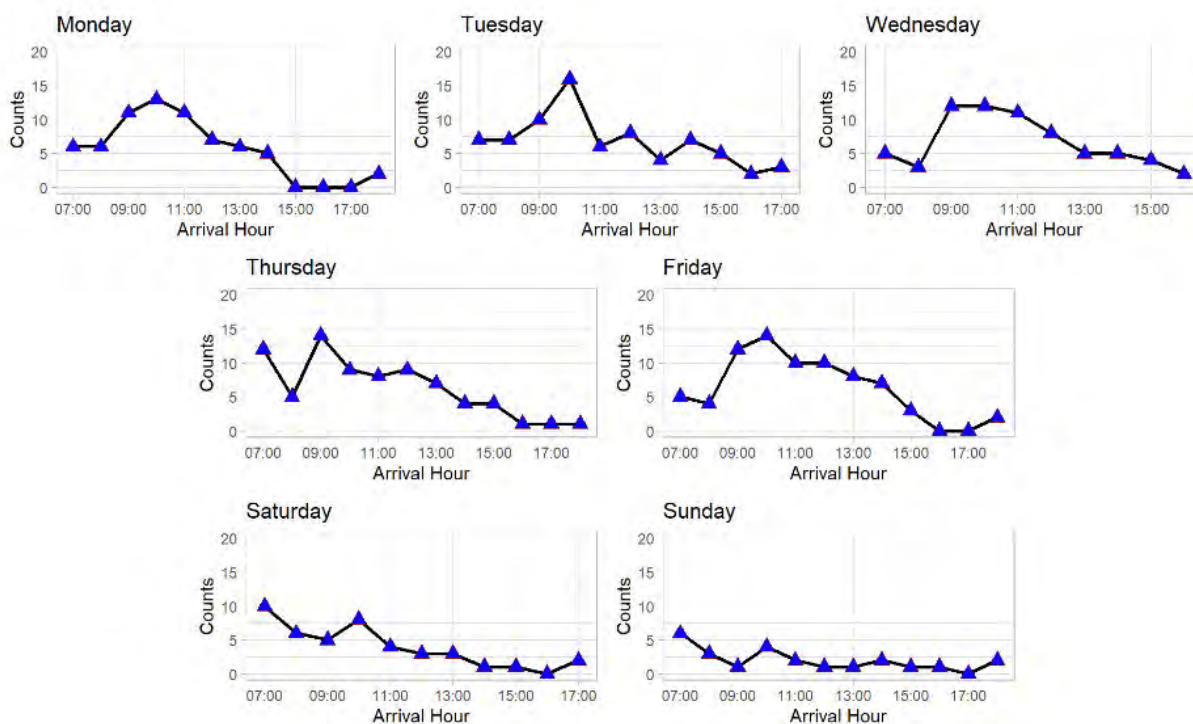


Figure 18: Hourly Activity along George IV Bridge (South Section 2019)

Data vs Proposals

Two loading bays are proposed on the west side of George IV Bridge (south) and a further bay on the east side; with timings Monday to Sunday: 06:30 to 10:30 am. Two loading bays are 19m in length (west), and the third is 13m, therefore accommodating a total of 8 vehicles. Assuming an average duration of 15mins, the total capacity of vehicles per day is 128 vehicles. This exceeds the observed demand of 69 and provides a level of contingency. The timings also cover the majority of the morning peak activity observed during 07:00-11:00.

5.6 Bristo Place

Table 7 shows that the peak day for loading is Friday, with 31 instances.

Table 7: Average loading durations per side along Bristo Place (2024)

	Date	Avg Duration East (Min)	Count East	Avg Duration West (Min)	Count West
Monday	25/03/2024	00:07:38	3	00:14:39	27
Tuesday	26/03/2024	00:03:53	3	01:13:45	9
Wednesday	27/03/2024	00:03:13	3	00:08:57	22
Thursday	21/03/2024	00:02:46	2	00:10:04	16
Friday	22/03/2024	00:01:08	4	00:23:58	27
Saturday	23/03/2024	00:16:00	1	00:04:00	5
Sunday	24/03/2024	N/A	0	00:10:15	1

	Date	Avg Duration East (min)	Count East	Avg Duration West (min)	Count West
Monday	2019-11-25	04:48	13	05:07	30
Tuesday	2019-11-26	04:38	15	06:52	19
Wednesday	2019-11-27	07:48	32	05:46	19
Thursday	2019-11-28	08:59	22	06:28	25
Friday	2019-11-29	06:09	20	11:26	31
Saturday	2019-11-30	04:24	10	07:22	14
Sunday	2019-12-01	06:16	5	09:17	2

Figure 19: Average loading durations per side along Bristo Place (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey the number of loading activities across the week has fallen, most notably on the east kerbside. The west kerbside has also seen an decrease in loading activity across each day. Whilst the number of loading activities has decreased on the west kerbside, the average loading activity duration has increased, with the exception of Saturday which has decreased.

The peak total daily volume of loading activities has fallen from 51 on Wednesday and Friday in 2019, to 31 on a Friday in 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week, however the 2024 data shows the highest number of loading activities taking place during a given day and hour was 8 compared to 16. The data comparison also indicates that the trend for loading days is still similar with peak days being during the week with weekends having minimal levels of deliveries being undertaken.

The following graphs on **Figure 20** shows the hourly activity along Bristo Place for the 2024 survey data. It shows that Monday has the most activity with 3 peak periods of 9am, 11am, 2pm. Wednesday also has 2 peak periods of loading activity at 9am and 1pm, whilst Friday has similar activity to Monday with 3 peak periods at 8am, 1pm and 4pm.

Figure 21 show the hourly activity along Bristo Place for the 2024 survey data. It shows that during the peak days (Wednesday and Friday), there are peaks of loading at 10am and 2pm.

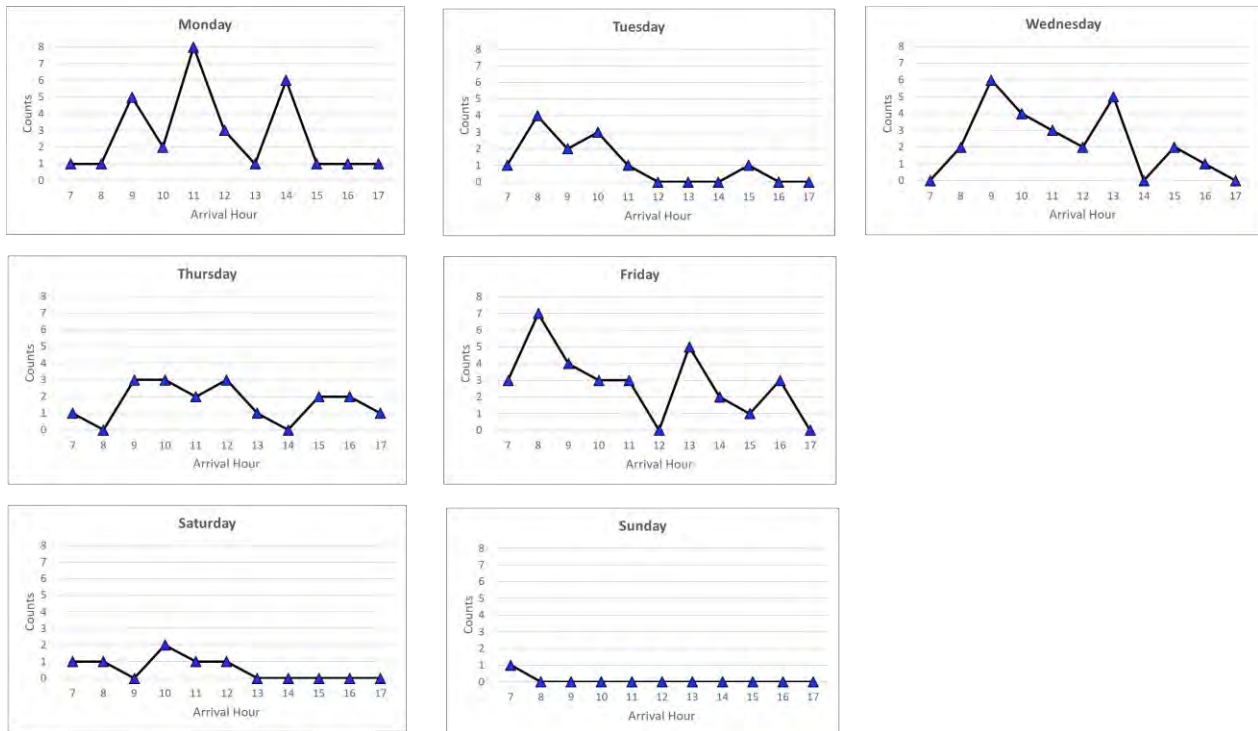


Figure 20: Hourly Activity along Bristo Place (2024)

Hourly Activity

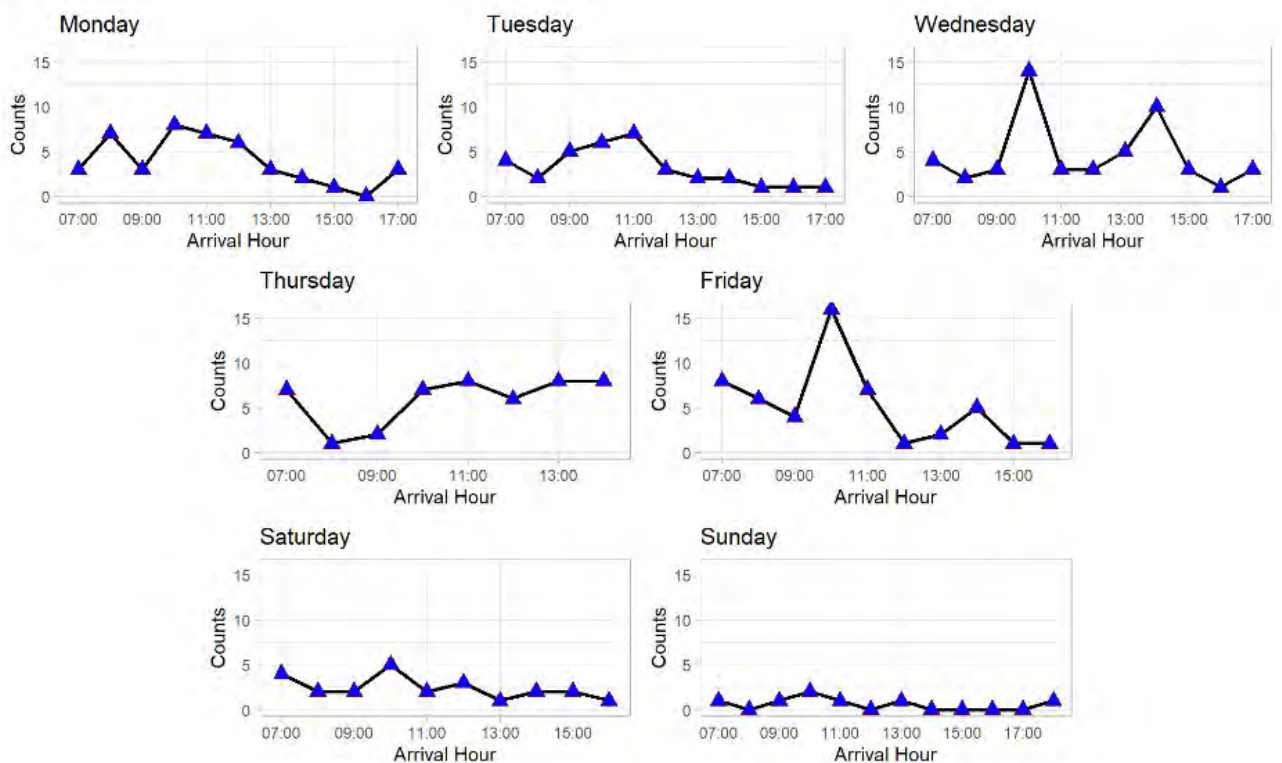


Figure 21: Hourly Activity along Bristo Place (2019)

Data vs Proposals

There are currently no loading bays proposed on Bristo Place, with nearest being Forrest Road and Teviot Place.

5.7 Teviot Place

Observations show that most of the loading takes place on the north side of the street. Table 8 shows that the peak day for loading is Monday, with 38 instances.

Table 8: Average loading durations per side along Teviot Place (2024)

	Date	Avg Duration North (Min)	Count North	Avg Duration South (Min)	Count South
Monday	25/03/2024	00:05:00	33	00:09:30	5
Tuesday	26/03/2024	00:07:16	30	00:03:58	3
Wednesday	27/03/2024	00:09:16	31	00:01:36	1
Thursday	21/03/2024	00:09:53	34	00:12:06	3
Friday	22/03/2024	00:05:15	28	00:03:01	4
Saturday	23/03/2024	00:07:34	13	00:03:18	2
Sunday	24/03/2024	00:01:51	27	N/A	0

	Date	Avg Duration North (min)	Count North	Avg Duration South (min)	Count South
Monday	2019-11-25	07:35	29	05:14	9
Tuesday	2019-11-26	09:43	36	06:06	10
Wednesday	2019-11-27	09:18	27	04:25	4
Thursday	2019-11-28	14:12	36	08:44	5
Friday	2019-11-29	22:10	32	03:40	8
Saturday	2019-11-30	07:33	16	13:54	5
Sunday	2019-12-01	06:25	9	00:00	0

Figure 22: Average loading durations per side along Teviot Place (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey the number of loading activities across the week has fallen, across both locations (north and south kerbside). The number of loading activities on the north kerbside remains high but has fallen slightly when compared to the 2019 data. The average loading activity duration has also decreased with the exceptions of Monday and Sunday.

The peak total daily volume of loading activities has fallen from 46 on a Wednesday in 2019, to 38 on a Monday in 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week, however the 2024 data shows the highest number of loading activities taking place during a given day and hour was 7 compared to 11. The data comparison also indicates that the trend for loading days is still similar with peak days being during the week with weekends having minimal levels of deliveries being undertaken. However, a notable difference is the more loading activities now occur on Sundays when compared to the 2019 data.

The following graphs on **Figure 23** shows the hourly activity along Teviot Place for the 2024 survey data. It shows a constant frequency of loading activities during the week. The peak during the week is Wednesday which has 2 peak periods of loading activity at 1pm and 2pm. Weekdays have a consistent steady frequency of loading activities, however Saturday and Sunday had fewer activities but still experienced peak periods: Saturday at 11am and 3pm and 5pm.

Figure 24 show the hourly activity along Teviot Place for the 2019 survey data. It shows that during the peak day (Tuesday), there are peaks of loading at from 10am to 2pm.

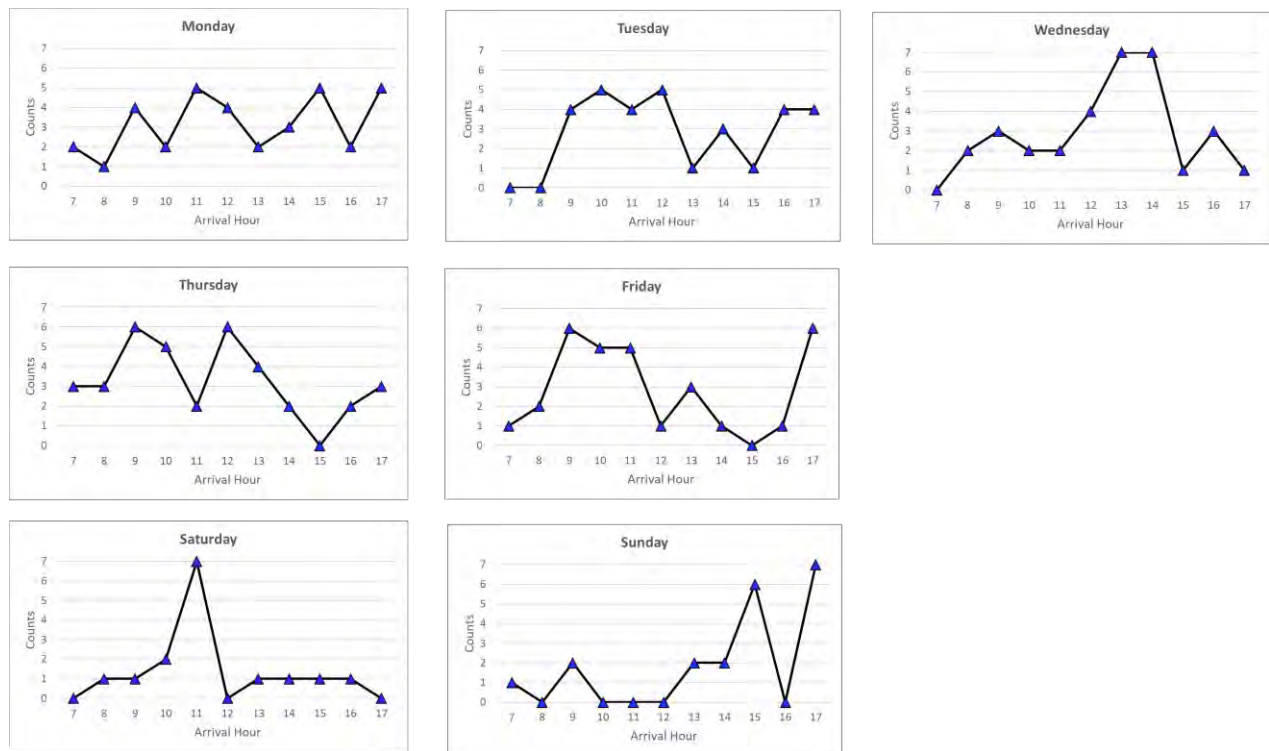


Figure 23: Hourly Activity along Teviot Place (2024)

Hourly Activity

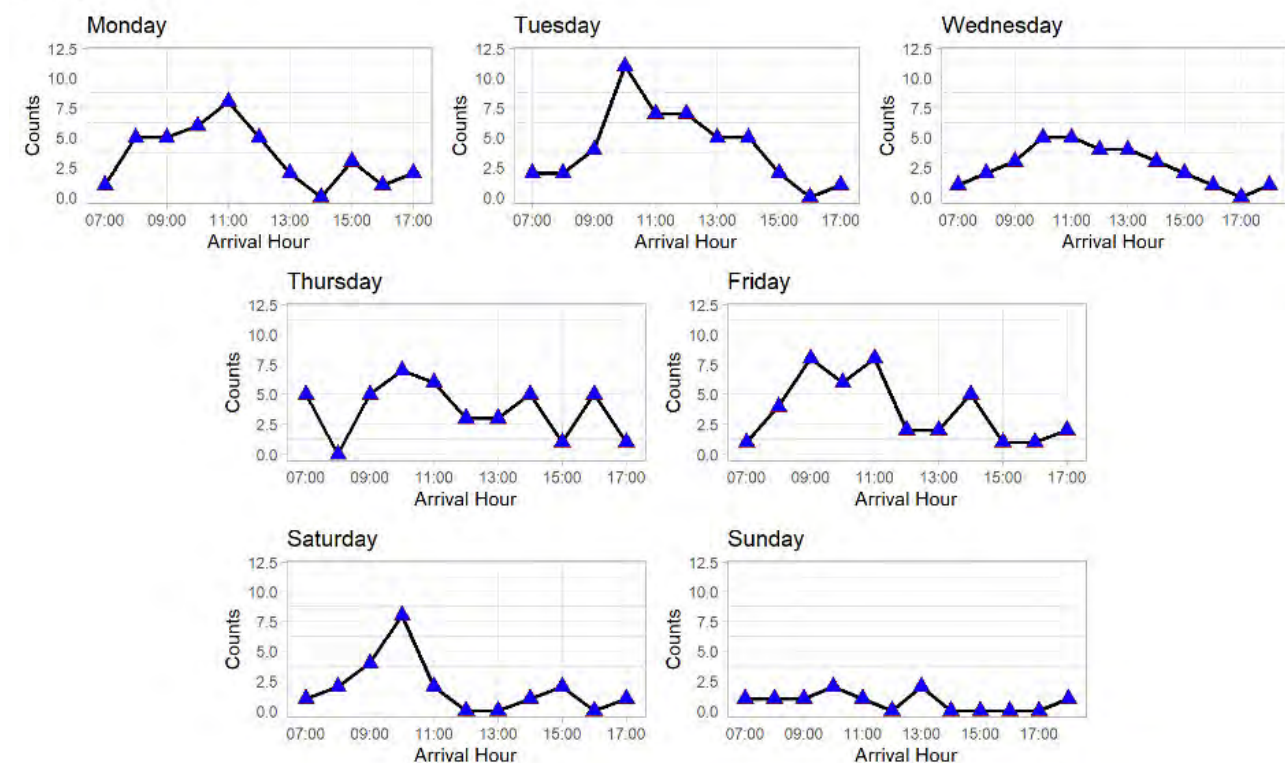


Figure 24: Hourly Activity along Teviot Place (2019)

Data vs Proposals

A 21m long loading bay is proposed on the north side of Teviot Place – with timings of Monday to Sunday: Midnight-6am; 10am-1pm; and 7pm-11.59pm. The bay accommodates a total of 3 vehicles. Assuming an average duration of 15mins, the total capacity of vehicles per day is 108 across the 12 hours available. This exceeds the observed demand of 38 and

provides a level of contingency. The timings of the bays are required to avoid peak traffic times and allow further junction capacity on the eastbound lane approach during these times, as such there will be some impact on the activities observed during the peak hours. Consultation will be undertaken with businesses and operators to support the changes of times as a result of the proposals.

5.8 Forrest Road

Observations show that most of the loading takes place on the west side of the street. Table 9 shows that the peak day for loading is Saturday, with 75 instances.

Table 9: Average loading durations per side along Forrest Road (2024)

	Date	Avg Duration East (Min)	Count East	Avg Duration West (Min)	Count West
Monday	25/03/2024	00:09:27	22	00:09:26	44
Tuesday	26/03/2024	00:06:38	18	00:09:36	34
Wednesday	27/03/2024	00:06:41	22	00:07:12	48
Thursday	21/03/2024	00:10:27	27	00:09:31	42
Friday	22/03/2024	00:11:38	27	00:08:23	26
Saturday	23/03/2024	00:04:08	21	00:07:34	54
Sunday	24/03/2024	00:02:51	15	00:07:02	40

	Date	Avg Duration East (min)	Count East	Avg Duration West (min)	Count West
Monday	2019-11-25	08:48	22	08:25	31
Tuesday	2019-11-26	22:11	19	12:21	27
Wednesday	2019-11-27	11:50	19	07:31	42
Thursday	2019-11-28	09:14	20	13:06	37
Friday	2019-11-29	09:51	16	10:59	31
Saturday	2019-11-30	52:20	13	30:18	34
Sunday	2019-12-01	10:22	4	17:01	15

Figure 25: Average loading durations per side along Forrest Road (2019)

Loading Volumes and Duration

Comparing the data from the 2019 Survey against the 2024 Survey the number of loading activities across the week has increased by approximately 25% across both locations (east and west kerbside), most notably on Sunday. The average loading activity duration has also decreased with the exceptions of Monday on the west kerbside.

The peak total daily volume of loading activities has increased from 61 on a Wednesday in 2019, to 75 on a Wednesday and 76 on a Saturday in 2024.

Loading Arrival Times

Comparing the data from the 2019 Survey against the 2024 Survey there are similar peaks throughout the week, however the 2024 data shows the highest number of loading activities taking place during a given day and hour was 12 which is similar when compared to the 2019 data. The data comparison also indicates that the trend for loading days is still similar with peak days being during the week with weekends having minimal levels of deliveries being undertaken. However, a notable difference is the more loading activities now occur on Sunday when compared to the 2019 data.

The following graphs on **Figure 26** shows the hourly activity along Forrest Road for the 2024 survey data. It shows that the peak periods are Thursdays at 9am and Sunday at 5pm. Loading activities are consistently frequent through the day and week along this road.

Figure 27 show the hourly activity along Forrest Road for the 2019 survey data. It shows that during the peak day (Wednesday), there is a peak of loading at 9am.

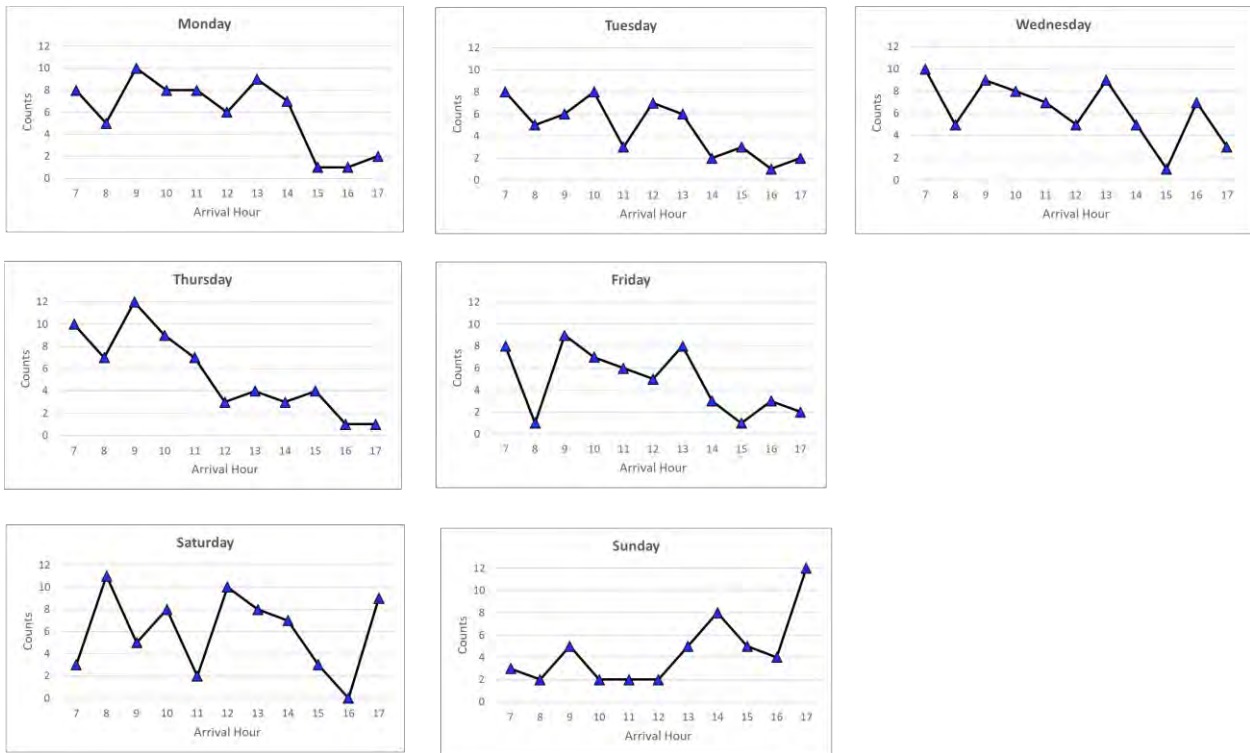


Figure 26: Hourly Activity along Forrest Road (2024)

Hourly Activity

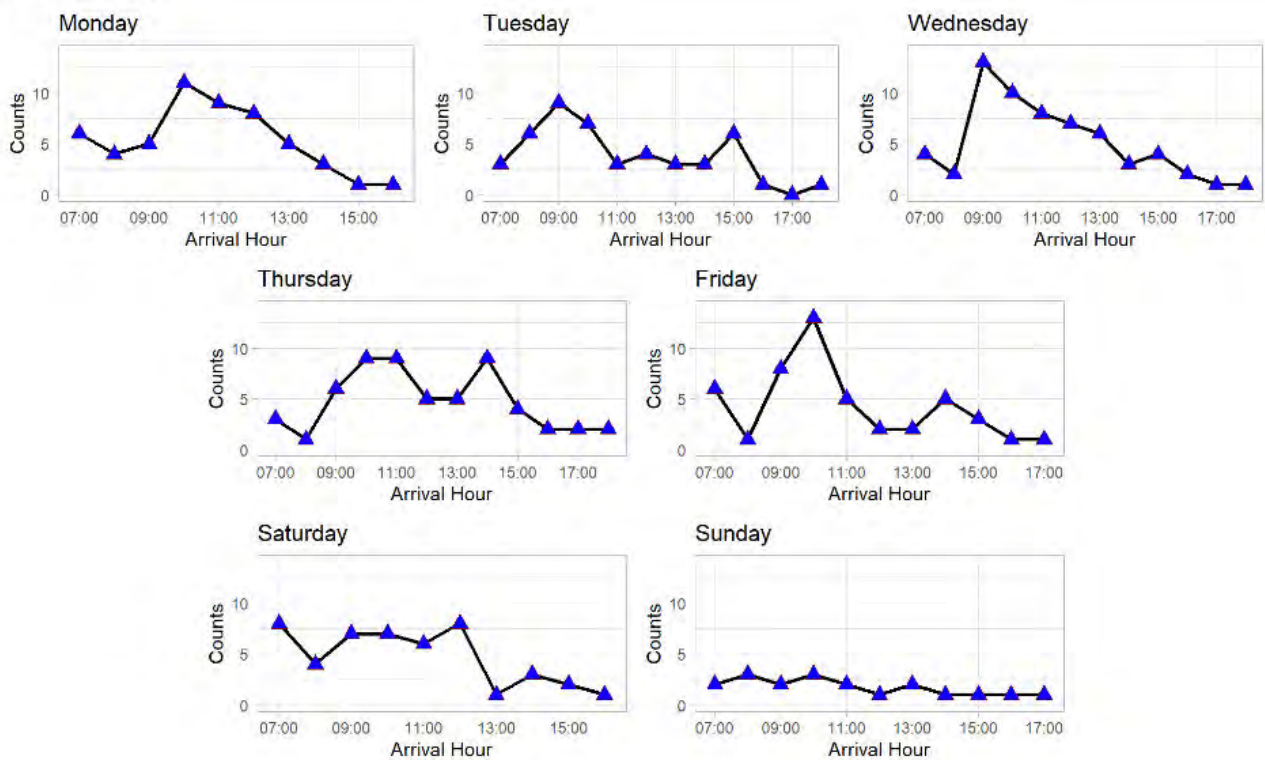


Figure 27: Hourly Activity along Forrest Road (2019)

George Heriots school is nearby on Lauriston Place, and we understand that Forest Road and is a popular location for school pupils to spend lunchtime and visit the shops. As such, any loading operation times on Forest Road should avoid the school lunchtime hours, as noted below:

- School start time – 08:35
- Break – 11:00 to 11:20
- Lunch – 12:35 to 13:15
- School end time – 15:15

Data vs Proposals

As a result of the following requirements;

- loading activity and times recorded on the street with peaks in the morning generally around 9am-11am;
- the peak cycling times of 7am to 9.30am; and
- school lunchtimes commencing at 12.35pm

We proposed loading and access times on Forest Road are: Monday to Sunday: 09:30 to 12:30 via two 19m long loading bays. Each bay accommodates a total of 3 vehicles, this a total of 6. Assuming an average duration of 10mins, the total capacity of vehicles per day is 78 across the 3 hours available. This exceeds the observed demand of 76 vehicles. Consultation will be undertaken with businesses and operators to support the changes of times as a result of the proposals.

Private Car Access

Forrest Hill, located off Forrest Road, has a small number of residents who either use a private vehicle or require taxi access for pickups and drop offs. **Figure 28** below shows the arrival times of private cars and taxis to either pick up or drop off people on Forrest Road. The peak day (Saturday) has two peak periods of 1pm and 5pm. The weekdays have a continuous follow of vehicles operating in the area with an average of 12-15 per hour.

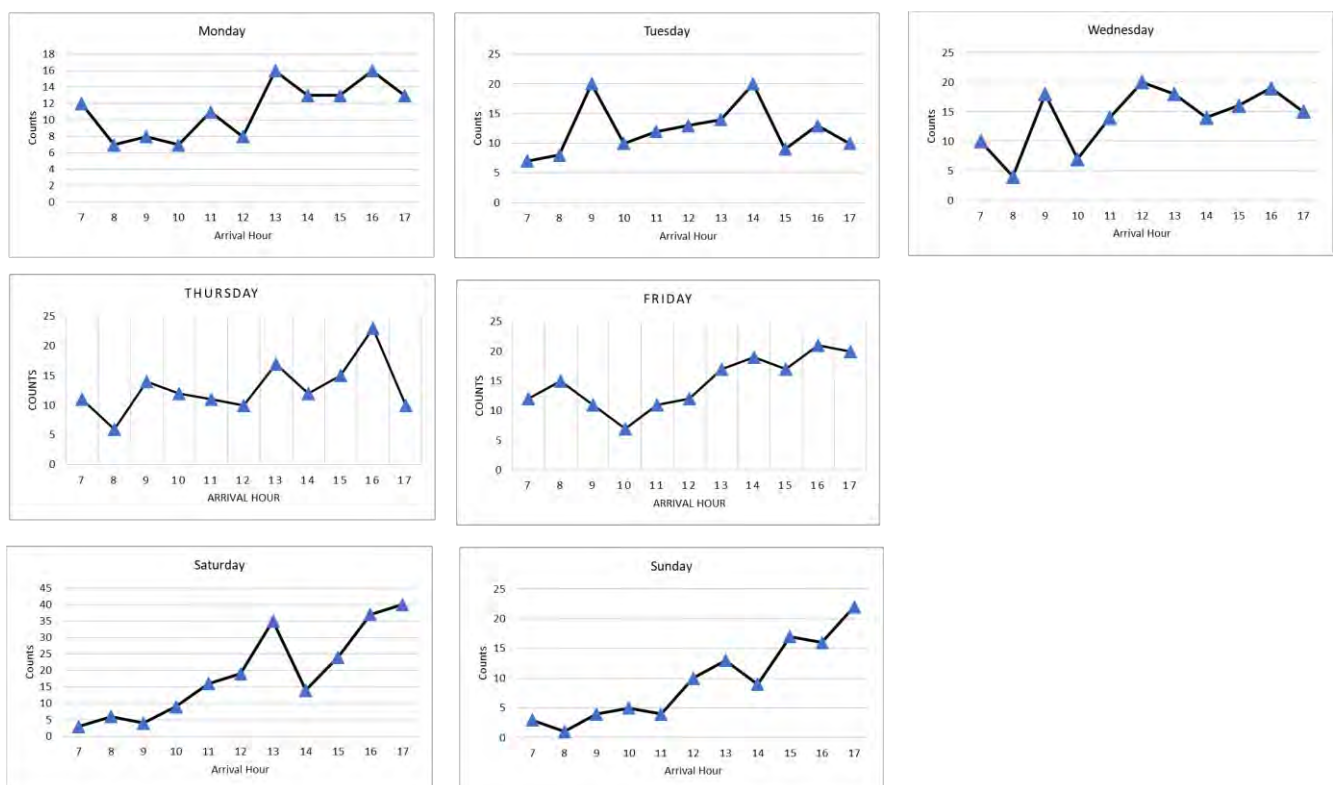


Figure 28: Pick up / Drop off, along Forrest Road, of resident associated with Forrest Hill by either Private Car or Taxi (2024)